LEICESTERSHIRE COUNTY COUNCIL

EDUCATION COMMITTEE

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# ANNUAL REPORT

## OF THE SCHOOL MEDICAL OFFICER FOR THE YEAR

## 1937

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J. A. FAIRER, M.D., D.P.H.

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J. A. FAIRER, M.D., D.P.H.

*Alfred Tacey, Printer, Leicester.*

17 Friar Lane,

Leicester.

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present my Annual Report of the work of the County School Medical Service for the year 1937.

The resignation of Dr. K. Cowan in April as the result of his appointment as County Medical Officer of Gloucestershire necessitated a change in the staff personnel. Dr. A. A. Lisney was promoted to the position of Deputy School Medical Officer and Dr. A. W. S. Thompson was appointed to fill the vacancy of Senior Assistant School Medical Officer thus created.

Two combined clinics for School Medical and Dental work are in course of construction. In my last report I anticipated that the conversion of the premises in St. Martin's would be completed before the end of the year. My optimism has not been rewarded, however, and owing to one or two unforeseen delays in construction the new clinic will not be ready for another few weeks. The foundations of the new Wigston Clinic have been laid and further progress in the building continues.

I regret to report that diphtheria continues to occur in various parts of the County in epidemic form. In an endeavour to combat this spread, immunisation has been undertaken by several Local Authorities and where they have difficulty in dealing with an epidemic, arrangements have been made with the County Health Department to assist in this prophylactic treatment. It is interesting to report that in the villages where immunisation was completed for any length of time no further cases were reported. Our efforts to allay the spread of the disease appear, therefore, to be fully justified. Full particulars of the immunisation carried out are given elsewhere in this report.

I should like to call attention to the undermentioned special reports and thank the Medical Officers concerned for these valuable contributions :—

(1)—"Rheumatic Disease in Childhood," by Dr. A. A. Lisney.

(2)—"Health Education and the School Child," by Dr. A. W. S. Thompson.

(3)—"External Squints and Hypermetropia," by Dr. C. Walters.

Dr. Lisney's article is in the nature of a preliminary report on an investigation into rheumatic disease in the county which he is carrying out with the co-operation of the Assistant School Medical Officers. This investigation will not be completed until later this year.

I desire to thank the entire staff for their loyal support and assistance during the year. To Dr. Lisney, Deputy School Medical Officer, I am indebted for the production of this report, and to Mr. Thornton, Chief Clerk in the School Medical Department, for the compilation of the statistics. It is due to their efforts that once again the School Annual Report goes to the printers before the end of January.

In conclusion I should like to express my appreciation of the kind consideration extended to me by the Chairman and all members of the Committee during the year.

I have the honour to be,

Your obedient servant,

J. A. FAIRER,

January, 1938. *School Medical Officer.*

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# REPORT.

## I.—GENERAL STATISTICS.

*Population of the County.*

The estimated population of Leicestershire as returned by the Registrar General in June, 1936, was 297,600. The Borough of Loughborough with a population of 29,863 is the only separate authority for elementary education within the administrative county. The total population with which the County Education Committee is concerned for purposes of Elementary Education is, therefore, 267,737.

*Number of Schools and Scholars.*

There are 277 elementary schools in the county, 109 council schools and 168 voluntary schools. The average number of children on the rolls of elementary schools during the year 1937 was 33,641 and the average attendance was 29,566, or 88 per cent.

## II.—STAFF OF THE SCHOOL MEDICAL SERVICE.

School Medical Officer :

J. A. Fairer, M.D., D.P.H. (County Medical Officer of Health).

Deputy School Medical Officer :

K. Cowan, M.D., D.P.H. (Deputy County Medical Officer of Health). (*Resigned* 31/5/37.)

A. A. Lisney, M.A., M.B., D.P.H.

Senior Assistant School Medical Officer and Assistant County Medical Officer of Health :

A. W. S. Thompson, M.B., D.P.H. (*appointed* 10/5/37).

Assistant School Medical Officers :

S. E. Murray, M.B., B.S.
J. B. Dalton, M.B., Ch.B.
Mary E. Weston, M.B., B.S.
Constance Walters, B.Sc., M.B., B.Ch. (School Oculist).

School Dental Surgeon :

P. Ashton, L.D.S.

Assistant School Dental Surgeons :

A. E. Ward, L.D.S.
C. L. R. McLellan, L.D.S.
D. R. A. Wilcox, L.D.S.
L. D. Smith, L.D.S.

The above officers are all employed full time in the service of the authority. Dr. Murray and Dr. Dalton devote the whole of their time to school medical work. Dr. Weston devotes two thirds of her time to school medical work and one third to maternity and child welfare. The work of Dr. Walters is equally divided between the maternity and child welfare service and the examination and treatment of school children suffering from defective vision. The work of Dr. Lisney and Dr. Thompson is chiefly concerned with the general administration of the service and the control of its special branches. These two officers have other duties in the public health service and only a portion of their time is allotted to school medical work.

## School Nurses.

†Mrs. Warren (Superintendent).
*Miss A. Addy, S.R.N.
Mrs. A. D. Antrobus, S.R.N.
†Miss C. E. Bangham, S.R.N.
Mrs. S. J. Bourne, S.R.N.
Mrs. P. Brunsdon, S.R.N.
*†Miss G. E. Butler, S.R.N.
*Mrs. F. E. Cade.
Miss G. I. Carryer, S.R.N.
Miss V. L. Davies, S.R.N. (Resigned 12.3.37.)
Miss M. A. Dilworth, S.R.N.
Miss G. E. Earl, S.R.N.
†Miss E. Y. Feakin, S.R.N.
Miss L. Fox, S.R.N.
Miss T. M. Griffiths, S.R.N.
*Miss K. A. Marsh, S.R.N.
†Miss W. C. Porter, S.R.N.
†Miss C. M. Ryder, S.R.N. (Appointed 19.4.37.)
Miss E. H. Seabrook, S.R.N.
Miss W. A. Simmons, S.R.N.
Mrs. E. E. Wright, S.R.N.

All the above are fully trained nurses and hold the certificate of the Central Midwives' Board. Those marked * hold the Certificate of Sanitary Inspector and those marked † have the Health Visitors'

Certificate (Ministry of Health). The Superintendent holds the Child Welfare Workers' Certificate.

## III.—CO-ORDINATION.

It is important from an administrative aspect that close co-ordination should exist between the various branches of the Health Services, the tendency to overlap thus being avoided.

All the medical services in this county are under the direct control of the county medical officer, who is also school medical officer, and the duties of the medical and health visiting staff bring them, as far as possible, in contact with all branches of the work.

Co-operation between the school medical and the maternity and child welfare services is particularly close, these departments functioning largely as one unit. By this means the supervision of the child is complete from infancy to adolescence.

The health visitors, who also act as school nurses, visit every child regularly from birth until school age is reached and every encouragement is given to the parents to bring their children to the welfare centres. In this way a reasonably complete record of each child is kept until the age of five, when he commences attending school. Full particulars are then transferred to the school medical department for the use of the medical officer who will find the history of these early days of value in making his assessment of the child's state of health at the entrant medical examination at school.

Unfortunately as mentioned in previous reports, the ideal has not yet been attained owing to the present very incomplete state of our maternity and child welfare services. The supervision of the health of the toddler is not as good as it might be and until some definite provision is made a lacuna will continue to exist between the infant welfare and school medical services. Admittedly this gap is partly bridged in so far as many of the visits made by the health visitors are to pre-school children, but a great deal still remains to be done and the only solution is the setting up of nursery schools and toddler's clinics or as an alternative, a more complete scheme of home visiting which would necessitate the augmentation of the present health visiting staff.

Co-ordination also exists between the school medical service and various other spheres of health and educational work, for instance the co-operation of the school medical officers and district

medical officers of health in dealing with outbreaks of infectious disease, and the reference of suspected tuberculosis found at school inspections or clinics to the tuberculosis officers for confirmation of diagnosis and any necessary home supervision or treatment.

## IV.—MEDICAL INSPECTION.

In addition to the medical inspection of the scheduled age groups of children on the lines laid down by the Board of Education, special examinations are undertaken when necessary.

Children found to be defective at previous routine and special inspections are seen again by the medical officer at the time of his visit to the school. A record of each child inspected is kept, giving either the results of treatment or the progress in the case of those under observation.

The duties of the assistant medical officers mainly consist of this work of routine and special examination and sessions are held at the schools daily throughout the year. The examination of mentally or physically defective children necessitates, in addition, a special home visit.

In all the modern schools the provision of a medical inspection room has proved of great benefit as during a medical examination a certain amount of quiet is absolutely essential. Unfortunately many of the smaller rural schools are not so well equipped with the result that there is unavoidable disturbance of the school routine.

The total number of children examined in the scheduled age groups at routine medical inspection in the schools was as follows :—

Elementary Schools, 10,412 compared with 10,696 last year.

Secondary Schools, 1,539 compared with 1,434 last year.

In 1935 approximately 4,100 children were transferred to the City Education Authority owing to the extension of the city boundaries. As a result less routine work is carried out and more time is now being devoted to the examination of mentally and physically defective children. Much valuable information has been obtained in consequence.

## V.—FINDINGS OF MEDICAL INSPECTION.

(*a*) *Uncleanliness.*

All cases of uncleanliness are immediately referred to the school nurses and during the year 314 cases were entered on the nurses' books. 195 of these cases were found during routine inspections.

In addition, the school nurses themselves discovered 4,774 unclean children during the periodic visits to the schools, when 110,471 children were examined. Last year's figures were 4,483 and 101,532 respectively.

These figures may at first appear very high, but as I have stated in my previous reports they include children with only a few nits together with dirty and verminous cases.

Only 21 cases of dirty or verminous children were excluded from school during the year. The majority of these cases are old offenders who are excluded periodically, but on whose parents prosecution has little or no effect. Several of them have been before the court at some time or other but beyond a temporary improvement nothing permanent is achieved.

(*b*) *Minor Ailments.*

All cases of this description are referred to the school clinics or their own doctors. Quite a number are also brought to our notice by the teachers, nurses, and school attendance officers. In a few cases where a long absence from school has occurred and no school clinic is available in the district, the children have been treated at the central office. This only applies where it has been impossible to persuade the parents to call in their own private practitioner.

In the very rural parts of the county these cases are either dealt with by their own doctors or the district nurses.

(*c*) *Tonsils and Adenoids.*

The medical officers referred 911 cases requiring treatment for some condition of the nose and throat. Of this total 460 children had enlarged tonsils, 81 suffered from adenoids, 334 had enlarged tonsils and adenoids and 36 were noted as having some other condition of the nose and throat requiring treatment. In addition 698 children were reported as having a defect requiring to be kept under observation.

During routine examinations 1,144 cases or 10.9% of the total number inspected were reported as having some defect of the nose and throat. In 571 or 5.5% of these cases operative treatment was recommended. The corresponding figures for last year were 563 and 5.3% respectively.

The number of cases referred from special inspections was 340 children for treatment, and 125 for observation.

(*d*) *Tuberculosis.*

No cases of pulmonary tuberculosis were discovered during routine inspections, but three cases were detected at special examinations.

Five suspected cases were referred to the tuberculosis medical officers for confirmation of the diagnosis and 2 were recorded as requiring to be kept under observation.

(*e*) *Vision.*

The number of children referred to the school oculist for examination or refraction was 817. All these cases had a definite defect in their vision requiring treatment, and in addition 95 cases were reported as having some refractive errors requiring to be kept under observation.

In addition to the above, 263 cases of squint were found to require treatment and 10 children had slight squints requiring to be kept under observation.

(*f*) *External Eye Disease.*

All cases included in this category are also referred to the school oculist and the medical officers reported 216 cases of external eye disease. Of these 92 were from routine and 124 from special inspections.

These figures include 114 cases of blepharitis, 26 of conjunctivitis, 7 of corneal opacities, and 69 cases with some other abnormal condition of the eyes requiring treatment. Only 5 cases were reported as requiring to be kept under observation.

(*g*) *Ear Disease and Hearing.*

The number of children referred for treatment under this heading was 183; 64 cases being reported from routine and 119 from special inspections.

These cases include 28 children with defective hearing, 110 suffering from otitis media and 45 classified as other diseases of the ear.

The number of cases for observation was 17.

(*h*) *Dental Defects.*

Only cases of a very urgent nature are recorded as requiring dental treatment and only 6 such cases were reported. These were immediately referred to the dental staff.

Records are kept of all children found at routine inspection to have four or more carious teeth and 2,152 such cases were discovered during the year.

(*i*) *Crippling Defects.*

Since the commencement of the orthopædic scheme the medical officers have been requested to report all cases of crippling defects however slight, and 114 cases have been notified ; 81 for treatment and 33 for observation.

Of the cases for treatment 6 were rickets, 7 spinal curvature, and 68 other forms of crippling defect.

(*j*) *Delicate Children.*

A register of children classified as delicate, is kept at the central office, and 99 cases were entered during the year.

This figure is definitely not a true record of the number of delicate children in the county, but without frequent re-examination of cases reported in previous years, and a complete census of the present school population, it is impossible to give anything like an exact figure.

These 99 cases include children classed as pre-tubercular and also those entered under the category of "D" in the table of nutrition. All these children would undoubtedly benefit from open air education, but the majority are of necessity attending the ordinary public elementary schools.

(*k*) *Nutrition.*

A record of the nutrition of each child examined at routine medical inspection is made on the child's medical record card. These

cases are classified according to the suggestions of the Board of Education. The four groups comprise excellent "A", normal "B", slightly sub-normal "C", and bad "D".

The number of children examined and classified appears in Table IIc in the appendix of this report. The percentages in the various categories were excellent 17.3, normal 72.9, slightly sub-normal 9.5, and bad 0.22. This year the percentage of children included in category "A" has increased, while the numbers in the other three groups all show a decrease, especially the last two classifications.

I do not propose to make any definite statement concerning these findings, as it is yet too early to draw any conclusions, but these figures certainly suggest that the present nutrition of the children in attendance at the public elementary schools is satisfactory.

Next year it is hoped that some useful information may be obtained by the re-examination of all children previously classified as slightly sub-normal and bad. A special report will be made by the medical officers in each case and it may be possible to offer some sound advice to the parents when the cause of the trouble can be ascertained.

## VI.—INFECTIOUS DISEASE.

Infectious disease was unusually rife in the county during 1937, and not for several years have the figures for schools closed and low attendance certificates issued been so high.

It was found necessary to close 12 schools for the causes set out in the table below :—

| | No. of Schools. | Average Period in "School" Days. | No. of Children Affected. |
|---|---|---|---|
| Influenza ..... | 5 | 5 | 276 |
| Measles ..... | 3 | 10 | 154 |
| Influenza & Whooping Cough | 2 | 5 | 74 |
| Measles & Chicken Pox .... | 1 | 15 | 36 |
| Diphtheria ..... | 1 | 15 | 29 |
| | 12 | | 569 |

Certificates of low attendance due to the prevalence of infectious diseases are issued, and the following is a summary for the year:—

| | No. of Schools. | Average Period in "School" Days. | No. of Children Affected. |
|---|---|---|---|
| Influenza | 116 | 6.7 | 12,064 |
| Measles | 45 | 11.11 | 4,041 |
| Chicken Pox | 10 | 12.7 | 736 |
| Diphtheria | 7 | 10.6 | 574 |
| Mumps & Colds | 6 | 6.6 | 901 |
| Mumps | 5 | 8 | 216 |
| Whooping Cough & Influenza | 4 | 11.2 | 335 |
| Whooping Cough | 4 | 21.2 | 178 |
| Chicken Pox & Measles | 3 | 11.6 | 225 |
| Chicken Pox & Influenza | 2 | 5 | 104 |
| Measles & Influenza | 2 | 5 | 475 |
| Mumps & Diphtheria | 1 | 5 | 95 |
| Chicken Pox & Influenza | 1 | 10 | 48 |
| Measles & Whooping Cough | 1 | 5 | 125 |
| Mumps & Measles | 1 | 20 | 139 |
| Chicken Pox, Influenza & Scarlet Fever | 1 | 20 | 17 |
| Whooping Cough, Influenza & Scarlet Fever | 1 | 10 | 327 |
| | 210 | | 20,600 |

As in 1933, the only recent year when the figures approached the above, the chief diseases interfering with education were influenza and measles. Measles, whooping cough and diphtheria are the most important of the zymotic diseases, and of these, diphtheria easily heads the list as a destroyer of child life. Deaths from this disease are the more regrettable because there are few conditions which are capable of such exact scientific control. Diphtheria can be cured in almost every case if efficient treatment is given at a sufficiently early stage, carriers and incubating cases can be picked out by bacteriological methods, individual susceptibility can be accurately estimated ; most important of all, active immunisation provides a means of prevention. Nation-wide immunisation could wipe out the mortality from diphtheria in a few years—a mortality averaging nearly 3,000 child lives in England and Wales every year.

The prevention of disease, however, is not a function of the Local Education Authority. It is a public health matter, and immunisation of children of school age can only be undertaken by the District Authority. The Education Authority may, however, provide facilities for the carrying out of immunisation on school premises.

During 1937, for the first time in this county, an attempt was made to control diphtheria by active immunisation. Previously the ordinary measures applicable to infectious disease in schools had been employed, and these were, of course, continued. All cases of infectious disease admitted to Isolation Hospital are notified to the school medical department, and a letter is then sent to the parents warning them to isolate contacts, especially children, for the prescribed period. Teachers have instructions about the steps to be taken when any of their pupils are affected. Central schools present a special problem, and in some cases it is necessary to exclude all children from certain areas in order to limit the spread of infection. Visits are paid to schools by members of the medical staff, the children are examined clinically, and swabs are taken for bacteriological examination. During 1937 the following special visits were made :—

| Date of Visit. | School. | No. of Children Examined. | No. of Swabs taken. | Number Positive. |
|---|---|---|---|---|
| *Diphtheria.* | | | | |
| 26. 1.37. | Griffydam Council Senior | 125 | 8 | 0 |
| 27. 1.37. | Copt Oak C.E. ..... | 26 | 8 | 1 |
| 28. 1.37. | Copt Oak C.E. ..... | 26 | 26 | 2 |
| 2. 2.37. | Copt Oak C.E. ..... | 29 | 29 | 0 |
| 3. 2.37. | Copt Oak C.E. ..... | 12 | 9 | 1 |
| 8. 4.37. | Griffydam Council Senior | 133 | 38 | 0 |
| 8. 4.37. | Griffydam Council Primary | 50 | 14 | 0 |
| 18. 6.37. | Griffydam Council Primary | 2 | 4 | 0 |
| 18. 6.37. | Griffydam Council Senior | 133 | 56 | 0 |
| 21. 6.37. | Osgathorpe C.E. ..... | 13 | 15 | 1 |
| 14. 9.37. | Shepshed C.E. Infts..... | 47 | 33 | 4 |
| 14. 9.37. | Shepshed Council Senior .... | 212 | 16 | 0 |
| 16. 9.37. | Shepshed C.E. Senior ..... | 150 | 33 | 1 |
| 7.10.37. | Woodhouse Eaves C.E. .... | 85 | 25 | 7 |
| | | 1,043 | 314 | 17 |
| *Scarlet Fever.* | | | | |
| 18. 6.37. | Coleorton C.E. ..... | 69 | 30 | 0 |

Experience has shown, however, that the most vigorous application of such general measures as those outlined above, has little effect on a diphtheria epidemic. The concern with which I regarded the epidemic of diphtheria which began to assume serious proportions in 1936, was mentioned in last year's annual report. To quote from a circular* on the subject, produced by the county medical officer in June, 1937 :—

> "During 1936, the number of cases of diphtheria among school children in the western half of Leicestershire was such that two schools had to be closed, and in others the attendance became abnormally low. The recognised methods of control were vigorously employed . . . . . In spite of our efforts, however, cases continued to occur ; the disease was of a severe type, and the death rate was high."

After much anxious consideration, active immunisation of the school population in the affected districts was decided upon.

> "By the middle of February (1937) immunisation had been commenced at Markfield and South Charnwood schools, while pre-school children were being immunised by a private practitioner, acting on behalf of the District Council. A little later, Copt Oak school was included in the scheme. . . .
>
> "Immunisation was entirely voluntary, and was undertaken only on the written request of the parent. The services of an Assistant Medical Officer and of the Medical Superintendent of Markfield Sanatorium, were provided by the County Council ; mileage and cost of material were assessed at a flat rate of 3/6 per case, and this charge the District Councils were asked to repay."

It will be noted that the Education Authority was only concerned with the provision of facilities in the schools ; the actual work was carried out by the public health staff, and the cost was borne by the District Council.

The scheme was so successful that immunisation was subsequently carried out in several other districts where the disease was prevalent. Details will be given in my county health annual report. The following table shows the number of children (including

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* "Diphtheria Immunisation in Leicestershire." Circular presented to a meeting of District Council Representatives in Leicester, 16th June, 1937.

secondary and pre-school children) given protective treatment during 1937 :—

| Date of 1st injection. | School. | Number of Children. |
|---|---|---|
| 12. 2.37. | Markfield Council..... | 101 |
| 15. 2.37. | South Charnwood Modern ..... | 39 |
| 23. 2.37. | Copt Oak C.E. ..... | 57 |
| 15. 9.37. | Shepshed C.E. Senior. | |
| | Shepshed C.E. Infants. | |
| 16. 9.37. | Shepshed Council Senior ..... | 591 |
| | Shepshed Council Infants. | |
| | Shepshed R.C. Senior. | |
| | Shepshed R.C. Infants. | |
| 15.10.37. | Woodhouse Eaves C.E. ..... | 180 |
| 5.11.37. | Rothley C.E. Senior. | |
| | Rothley C.E. Infants. ..... | 278 |
| 10.12.37. | Quorn C.E. Senior . | |
| | Quorn C.E. Infants. ..... | 261 |
| | | 1,507 |
| | February. By private practitioner. ..... | 91 |

Immunisation consisted of three injections of Diphtheria Prophylactic (T.A.F.) at fortnightly intervals. Full protection cannot be expected from such a course until at least two months have elapsed after the third injection. Ideally, therefore, children should be immunised before an epidemic breaks out. Propaganda by the health department during the last twelve months has made the public aware of immunisation and its benefits, and parents who are wise will arrange with a private practitioner to have their children treated. Teachers should advise parents who are in doubt to discuss the matter with their own doctors.

## VII.—FOLLOWING UP.

The school nurses made the undermentioned number of visits during the year for the purpose of following up :—

| | |
|---|---|
| First Visits .... .... .... | 2,460 |
| Second Visits .... .... .... | 397 |
| Special Visits .... .... .... | 618 |

A number of children seen by the school medical officers at the routine or special inspections are found to be suffering from defects which require treatment. In these cases the parents are advised to consult their own doctors or to allow their children to receive the necessary treatment through the medium of the school medical department. Unfortunately some of the parents take little or no notice of the advice given. In such cases the school nurse visits the home in an endeavour to convince the parents of the necessity for having their child treated. Where treatment has been undertaken the nurse calls in order to ascertain progress.

Each school is visited by a school nurse at least once every quarter for the purpose of cleanliness inspections. The homes of those children found to be unclean are subsequently visited and advice and assistance given to the parents in order to effect an improvement. Further visits are also made until the nurse is satisfied that the child is quite clean and that the parents are familiar with the precautions necessary to prevent a recurrence of uncleanliness.

The efficacy of school medical inspection depends to a large extent on this system of following up by the school nurses which ensures close and constant contact with the parents of those children who are defective and require treatment. The majority of parents respond well and are only too anxious to co-operate so that the child receives the necessary treatment. A minority, however, through ignorance or procrastination refuse to avail themselves of the facilities offered and the child suffers in consequence. Should the defect be serious, either the school medical department or the N.S.P.C.C. take further action.

## VIII.—MEDICAL TREATMENT.

(*a*) *Minor Ailments.*

The treatment of minor ailments is still continued at the various clinics in the county. A clinic is also held every Saturday morning at the central offices in Leicester, but this has been somewhat curtailed during the last year as the premises are not suitable. Structural alterations are at present taking place on the premises previously occupied by the staff of the public assistance department, and a combined minor ailment and dental clinic will be available as soon as this work is completed. The building will be a complete clinic when finished, and consists of a waiting-room and recovery room in addition to a dental surgery and two rooms reserved for medical examinations.

A further health centre is in course of erection at South Wigston, and it is contemplated that work will be commenced in this clinic during the autumn of 1938. At least one session per week will be devoted to the treatment of minor ailments, and as a considerable number of children will be accommodated at the new schools it is felt that this extra clinic will be fully justified.

The number of attendances at the present clinics is as follows :

| | Children. | Attendances. |
|---|---|---|
| Hinckley ..... | 508 | 929 |
| Coalville ..... | 307 | 710 |
| Melton Mowbray ..... | 520 | 1,876 |
| Leicester ..... | 189 | 204 |
| | 1,524 | 3,719 |

Two sessions are held at the clinics at Coalville and Melton Mowbray ; a medical officer attends once per week and a school nurse takes charge of the second session.

The clinics at Hinckley and Leicester are held under the supervision of a medical officer on one morning each week, Tuesday and Saturday respectively.

All the clinics are still under the control of the same medical officer and as was pointed out in my last year's report this method of administration has proved very satisfactory. It will not be possible with the opening of a clinic at South Wigston to continue this arrangement, as the medical officer concerned will not have sufficient time to attend each clinic, and other arrangements will have to be made.

The clinics in the county are of considerable benefit to the teachers as regards dirty and verminous children, and a considerable number of these cases are dealt with each year. 119 cases attended during 1937 and these children were not allowed to continue their attendance at school until they were in a fit condition and thoroughly clean.

A high standard of cleanliness is still required and visits are made to the parents of children with only a few nits. In cases such as these a few words of advice from the school nurse invariably have the desired effect, but in cases of verminous children it is often

necessary to take drastic action before the parents realise their responsibilities, and that the Committee insist on absolute cleanliness.

Action is usually taken through the school attendance department or by the officers of the N.S.P.C.C. supported by the medical and nursing staff.

Arrangements are also made whereby a stock of nit combs are kept at the central office, and these can be purchased by parents. Similar combs are also loaned to parents through the school nurses and this concession is much appreciated by large families where the mothers have had difficulty in keeping the children's heads permanently clean.

(*b*) *Tonsils and Adenoids.*

The medical officers have referred 911 cases for treatment during the year : tonsils only, 460; adenoids only, 81; tonsils and adenoids 334, and other conditions of the nose and throat 36.

The number referred for treatment last year was 844.

Although the number of cases referred for treatment has increased the number actually receiving operative treatment shows a considerable decrease. There is, however, a large number of cases for whose treatment arrangements have been made but who had not actually been admitted to hospital for operative treatment before the end of the year.

Treatment is undertaken through the county scheme and the operations are performed at the Leicester City Clinic, the Loughborough General Hospital and the various Cottage Hospitals as follows :—

| | |
|---|---|
| Leicester City Clinic ..... | 197 |
| Melton Mowbray Hospital ..... | 41 |
| Loughborough General Hospital .... | 11 |
| Ashby-de-la-Zouch Hospital ..... | 7 |
| Market Harborough Hospital..... | 1 |
| Hinckley Hospital ..... | 4 |

The total number of children who received operative treatment was 320, and with the exception of 59 arranged privately all were carried out through the Authority's scheme.

These 320 cases cost approximately £381, but of this amount £229 was contributed by the parents, leaving a net amount of £152 chargeable to the Committee. The scale of charges still continues to work satisfactorily, and little or no difficulty is experienced in collecting the parents' contributions.

No case is referred to the hospitals for treatment except on the advice of a medical officer, and a preliminary examination by the surgeon is arranged before the final treatment is undertaken. These precautions are taken to ensure that no child shall undergo operative treatment unless it is absolutely essential.

(*c*) *Tuberculosis.*

Accommodation for the treatment of children suffering from pulmonary tuberculosis is provided at the County Sanatorium, Markfield. Twenty-two beds are available and arrangements exist for the education of the children, a teacher being included on the staff. During the year 28 children received treatment at this institution.

Surgical cases of tuberculosis are admitted to the hospitals at Coleshill and Harlow Wood and the City General Hospital, Leicester. During the year 6 children were admitted to these institutions. Certain cases are also admitted to Markfield Sanatorium and are usually children suffering with gland or abdominal tuberculosis. Nine cases were admitted during the year.

Out-patient treatment is provided at the orthopædic clinics at Hinckley, Coalville, Leicester and the Leicester Royal Infirmary.

(*d*) *Skin Diseases.*

Diseases of the skin are treated at the school clinics if within reach of the patients' homes. If no clinic is situated in the vicinity, treatment is undertaken privately.

Impetigo is by far the most common skin disease, 113 such cases receiving treatment during the year at the school clinics and 170 receiving treatment privately.

The number of cases of scabies treated at the clinics during the year was 15 as compared with 10 in 1936.

The assistant school medical officers treat ringworm of the

scalp and body at the various school clinics and during 1937 fourteen children attended for treatment. In addition, general practitioners treated 33 cases. Ringworm of the scalp necessitates a comparatively long course of treatment and although some cases can attend school providing they wear a special cap it is not advisable to insist on attendance until treatment is completed.

X-ray treatment is possible in a small proportion of cases where the consent of the parents is obtained but unfortunately this form of treatment necessitates a journey to Leicester which accounts for the small percentage of parental consents. Treatment of county cases at the Leicester City Clinic is available by arrangemant with the Leicester City Education Authority. During the year only one county child was treated by X-ray.

Examinations of specimens of hair as an aid to diagnosis and as an indication of cure are carried out at the County Laboratory. During the year 21 specimens of hair were submitted for examination by medical officers and 4 were found to be positive.

The number of cases of other forms of skin disease which received treatment at the school clinics during the year was 101.

(*e*) *Ear Diseases and Defects.*

Arrangements are in force with the City Education Authority for the treatment at the Leicester City Clinic of county children suffering from diseases and defects of the ears.

During the year 65 children were referred to this clinic, and of these 8 did not attend or refused treatment. The children treated made 166 attendances, 2 were recommended for operation for removal of tonsils and adenoids, and 37 were discharged as cured. The remainder are still in attendance or discontinued treatment before being discharged as cured.

## IX.—DENTAL TREATMENT.

During the present year, 21,653 children have been examined at routine visits to the schools and 1,265 children were refused inspection under the new regulations regarding refusals.

The average attendance at the schools visited was 22,918 which includes the children excluded from the scheme. The corresponding figure for the whole county was 31,500 which leaves an average

attendance of 8,582 children in the schools which did not receive a visit from the dental staff.

At the end of the previous year the figure was 4,562.

Had it been possible for the Committee's recommendation for additional staff to be carried out early in the year, this report would have been a matter for considerable satisfaction, whereas it must now be a question for serious consideration.

Previous to the year 1936, the policy of the Committee was to restrict the visits of the dental staff to a certain number of schools which could be visited annually. Extra schools were included in the scheme as and when additional dental surgeons were appointed.

In my opinion this policy was definitely the best to pursue, and even though some children received preferential treatment, the fullest value for expenditure was obtained.

Naturally there was a very strong desire on the part of those districts not included in the scheme to be provided for and as a result of pressure from those areas, it was decided to extend the interval between inspection and treatment to a period exceeding twelve months.

The effect of this experiment was fully explained in my report for 1936, when 1,500 extra children were inspected and treated.

During the present year, only two of the five districts have been completed and the following summary will allow comparison between those districts where treatment has been completed and those still unfinished.

**Districts No. 1 and 2.**

| Year. | No. Inspected. | No. Referred for treatment. | No. Treated. | No. of Fillings. | No. of Extractions. |
|---|---|---|---|---|---|
| 1936 | 10,679 | 5,970 | 4,307 | 6,417 | 4,808 |
| 1937 | 9,831 | 5,814 | 4,558 | 6,395 | 4,481 |
| **Districts No. 3, 4 and 5.** | | | | | |
| 1936 | 16,259 | 9,029 | 6,383 | 7,849 | 7,477 |
| 1937 | 11,822 | 7,058 | 5,347 | 7,570 | 5,314 |

The number of children in districts 1 and 2 who received conservative treatment in 1937 was 2,573 and those who had only extractions, 1,985. The corresponding figures for districts 3, 4 and 5 are 2,902 and 2,445.

Before consideration of the above table, it is necessary to state certain obvious facts.

(1) The amount of work a dental surgeon can perform depends entirely on the nature of such work.

(2) The number of children he is able to completely treat depends on the amount and difficulty of the work necessary for each individual child.

(3) The number of children he is able to deal with depends on the number he has to inspect to ascertain his full complement of work. With a high refusal rate, more inspections would be required than where the refusals are low.

Districts Nos. 1 and 2 were completed in 1936 and again this year. Both are in a very satisfactory condition and require little comment.

The number inspected is slightly less in 1937 than last year and is accounted for by the number ruled out of the scheme in accordance with the new regulations and a slightly reduced attendance. The number referred for treatment is also less, as it should be, but the number treated has increased owing to a lower refusal rate. The amount of work actually performed is approximately the same.

As the object of any dental scheme is the preservation of the permanent teeth, it is very gratifying to find that the number of children who received conservative treatment is appreciably higher.

With regard to the three districts which were not fully completed in 1936, it will be seen that the number of children it has been possible to deal with has considerably decreased as also the number treated.

The amount of work performed shows a slight decrease in conservative work and also in the number of extractions, but the refusal rate is less. This state of affairs is entirely due to the three facts previously stated.

It must be realised that the dental surgeons responsible for these areas commenced the year with an average attendance of 4,562 children brought forward from last year. These children were all in attendance at schools not visited in 1936.

As a number of these children had not previously had systematic dental treatment and the remainder had not had any treatment for over twelve months, the nature of the work required was of a more exacting nature and consequently required considerably more time. This extra work was not unexpected and I foreshadowed this fact in my report for 1936.

Regular visits are paid to each of the dental surgeons in their particular areas and I have seen the type of work being done. I am quite convinced that their work during the last year has been considerably more exacting and difficult. The average amount of work per session has therefore fallen from 7.8 to 7.3 in fillings and 7.7 to 5.2 in extractions.

The comparison of these two portions of the county fully emphasises what has for years been quoted in the report of the chief medical officer of the Board of Education to the effect that the interval between inspections and treatment should not be longer than twelve months.

The percentage of refusals in all schools visited averaged 23, but it must be remembered that 1,265 children who had previously refused treatment on two occasions were not inspected or offered treatment. Whilst it would be correct to say that 77% of the children requiring treatment have been dealt with and were left with a sound permanent dentition, there is no record of the state of the teeth of of those 1,265 children excluded from the scheme.

While dealing with the question of refusals, it gives me pleasure to record that in one particular district the percentage of refusals is as low as 16 and only 25 children have had to be excluded from the scheme.

This speaks well for the influence of the teachers, the interest of the parents in the scheme, and the enthusiasm of the officer concerned.

General anæsthetics were administered in 10 cases, all undertaken at the Leicester Clinic.

The attendances at the Saturday morning clinics have fallen from 870 to 811 owing to the fact that the clinic in Leicester had to be closed in August for structural alterations which are not yet completed.

Contributions are still collected from the parents under the same scheme and the amount collected remains approximately the same as last year.

In conclusion I would again like to express my thanks to the dental staff for their work and enthusiasm and also the medical officers and nursing staff for their co-operation during the past year.

I would also like to express my appreciation of the whole-hearted support I have received from the teachers in the county who are always ready and willing to do all they possibly can to further the success of the dental services.

PERCY ASHTON,

*School Dental Surgeon.*

## X.—TREATMENT OF DEFECTIVE VISION.

The number of children examined by the school oculist this year has increased from 1,663 children in 1936 to 1,910 in 1937.

All cases of defective vision or other diseases of the eye are immediately referred to the school oculist and the children are examined either on the school premises or in the various health centres throughout the county. Urgent cases, or children requiring a special examination are inspected at the office clinic on Saturday mornings.

Where refractions take place on the school premises, a dark room is obtained in the building and in the more modern schools this is easily arranged and the rooms are perfectly satisfactory. In some of the older buildings and small rural schools, it is often very difficult to obtain a satisfactory dark room, but this difficulty is usually overcome by hiring a room in a private house as near as convenient to the school.

When appointments are arranged a certain amount of time is always allowed for the re-examination of cases seen by the school oculist one or two years ago. All cases of myopia, external squints and a selected number of internal squints are re-inspected yearly.

During the routine and special examinations carried out by the assistant school medical officers, 1,296 children were referred for treatment—840 from routine and 456 from special inspections. Quite a number of these children were already wearing glasses previously prescribed by the school oculist, but were found on examination to require a change of lenses and consequently further refraction.

These 1,296 cases included the following :—

Blepharitis 114, conjunctivitis 26, corneal opacities 7, defective vision 817, squint 263, and other conditions 69.

The mydriatic used is homatropine and cocaine and previous to the actual examination the written consent of the parent is obtained through the school nurse. In 36 of the 1,910 cases recommended for refraction, this consent was refused, and in addition, 26 children were absent at the time of inspection.

The number of completed examinations was, therefore, 1,848 and is summarised as follows :—

| | | |
|---|---|---|
| Glasses not necessary .... .... .... | 227 | 266 |
| Present glasses satisfactory .... .... | 39 | |
| Refractive errors only and requiring glasses | 1,411 | 1,582 |
| Other diseases of the eye and refractive errors requiring correction .... .... | 171 | |

The total number of children requiring correction by glasses was, therefore, 1,582 and these cases are summarised as follows :—

| | | |
|---|---|---|
| 1,067 | (67.45%) | cases of Hypermetropia |
| 371 | (23.45%) | cases of Myopia |
| 116 | ( 7.33%) | cases of Mixed Astigmatism |
| 28 | ( 1.77%) | cases of Myopia and Hypermetropia |

A record has also been kept of any child showing signs of strabismus as follows :—

| | | | |
|---|---|---|---|
| Internal concomitant strabismus | | ..... | 278 |
| External | ,, ,, | ..... | 9 |
| Internal alternating | ,, | ..... | 162 |
| External | ,, ,, | ..... | 37 |
| | | | 486 |

A summary of the cases refracted during each of the last five years is as follows :—

| | Hypermetropia | Myopia | Mixed Astigmatism | Myopia and Hypermetropia | Squint |
|---|---|---|---|---|---|
| 1933 | 67.37% | 20.84% | 9.43% | 2.34% | 9. 9% |
| 1934 | 67.53% | 21.82% | 8.69% | 2.58% | 12.14% |
| 1935 | 66.42% | 22.35% | 8.86% | 2.31% | 9.25% |
| 1936 | 65.73% | 25.21% | 7.26% | 1.79% | 24.71% |
| 1937 | 67.45% | 23.45% | 7.33% | 1.77% | 30.72% |

It will be observed that there is a considerable increase in the number of children with squints. As was mentioned in my last report the school oculist re-examines as many of these cases as possible, even though they may only have been refracted during the previous twelve months.

The following diseases were diagnosed during the examination of children with defective vision and they are arranged under their anatomical headings :—

*Eyelids.*

Styes 40 ; Blepharitis 91 ; Meibomian Cyst 3 ; Ptosis 9.

*Conjunctiva.*

Catarrhal Conjunctivitis 33 ; Conjunctival Cyst 1.

*Lachrymal Apparatus.*

Chronic Dacryocystitis 3.

*Cornea.*

Corneal Ulcer 2 ; Superficial Keratitis 1 ; Corneal Nebulæ 24 ; Leucoma Adherens 1 ; Phlyctenular Conjunctivitis 2.

*Uveal Tract.*

Anterior Synechia 2 ; Posterior Synechia 1 ; Coloboma Iris and Chorioid 3; Chorioiditis 2: Iritis 1 ; Uveitis 1 ; Retinal Hæmorrhage 2.

*Lens.*

Posterior Polar Cataract 1; Lamella Cataracts 3; Subluxation of lenses 3.

*Muscular Apparatus.*

Congenital Nystagmus 12 ; Excised globe 2.

## PROVISION OF SPECTACLES.

All spectacles are supplied through the department whether obtained by the parents or provided free by the Committee.

The total number of glasses obtained by the parents or supplied free by the Committee was 1,460. This figure is very satisfactory when compared with the number of children for whom glasses were prescribed—1,582.

Of the total of 1,460, the Committee provided 176 pairs of glasses free of charge for necessitous cases. In every other case the glasses were obtained through the department but paid for by the parents themselves.

The types of frames obtained were as follows :—shellite 686 ; gold 68 ; nickel 413 and new lenses only, 293.

During the year it was decided to give the contract for the supply of glasses to a local firm of opticians. The work of this firm has proved to be of a very high standard.

The change has considerably increased the efficiency of the service as it is now possible to supply glasses without the two days' delay required for despatch to and from London. It is also possible for cases requiring particular fittings to be referred direct to the opticians, thus obviating the necessity of returning frames to London for re-adjustment as was sometimes found necessary.

Considerable time is saved in supplying the actual glasses and this is particularly apparent in the case of repairs. Children suffering from very high myopia very often break a lens or lenses and as it

is most important that they should not be without glasses for any length of time it is often possible to have the repairs executed with a minimum delay.

It will be noticed that a considerable number of children have again been supplied with new lenses only. New frames are only supplied when the previous ones are damaged or are too small for the child.

Arrangements are still carried out for the repair of broken lenses or frames through the Committee's opticians and during the year 171 pairs of spectacles were dealt with.

In addition to the 1,460 pairs of glasses obtained through the department, 22 were obtained privately by the parents. These children were under private treatment and are not included amongst the children examined by the school oculist.

The number of children for whom glasses were prescribed but whose parents have so far failed to provide is 293. The cases were practically all examined during the last few weeks of the year and in the majority of cases the glasses will be sent for early in 1938.

Very little difficulty is encountered in persuading parents to obtain suitable glasses and the correspondence from the central office usually has the desired effect. Pressure is not brought to bear on parents whose children have only a slight error of refraction, but if glasses are not obtained, the children are kept under observation and if the condition becomes more serious the parents' attention is called to the fact.

In necessitous cases glasses are provided free of charge by the Committee and parents therefore have no excuse for refusing treatment on financial grounds. The financial circumstances of each case is assessed according to a scale of income and as this scale tends to be on the generous side no hardship is caused in cases where financial assistance is refused.

Careful note is taken of all children suffering from any degree of myopia and particular attention is paid to this type of case to ensure that they have suitable glasses. Very little opposition is met with, but one always expects to have to contend with a certain number of obstinate parents. Luckily in this county they are few. They

are usually dealt with through the officers of the N.S.P.C.C. and it is not often that more than one visit is necessary to convince the parents that glasses are a necessity and to make them realise their responsibilities.

The co-operation of the N.S.P.C.C. in the work in this direction is very valuable and much appreciated by the staff of the department.

## XI. — COUNTY ORTHOPÆDIC SCHEME.

The county scheme for the ascertainment, treatment and after care of crippling defects continued to show satisfactory progress during the year.

There are altogether four out-patient clinics, two of which are entirely under the control of the County Council while at the remaining two, arrangements have been made with Leicester City and a Voluntary Association respectively for the treatment of county cases. In-patient treatment is available at the Leicester, Coleshill and Harlow Wood Orthopædic Hospitals and as the orthopædic surgeons and staff attached to these hospitals are in charge of the various clinics, continuity of treatment is thus secured.

There is complete uniformity in the administrative control of the scheme as all arrangements for treatment, either in-patient or out-patient, are made from the central office in Leicester where are kept the registers of attendance at the clinics, the records of admission to, and discharge from, hospitals, and the records of progress of the patients.

Children are referred to the orthopædic clinics not only through the school medical department but also through the maternity and child welfare and tuberculosis departments, the facilities provided by the scheme being available to these services. The various committees concerned share the overhead charges and cost of treatment.

The early ascertainment which is ensured through the co-operation of the maternity and child welfare department results in an ultimate alleviation of the burden of expenditure on orthopædics which has to be borne by the Education Authority. As a rule, the earlier the discovery of a crippling defect the shorter and less expensive will be the period of treatment necessary.

As I have stressed in previous reports, the entire success of the orthopædic scheme depends on early ascertainment and immediate suitable treatment, both of which increase the prospect of cure and reduce the ultimate cost. It is satisfactory to report that an increasing proportion of early defects are dealt with at the orthopædic clinics with the result that the number of cases requiring long and costly in-patient treatment is much less than formerly and the number of children discharged as cured has increased proportionately.

During the course of their home and school visits the school nurses occasionally discover children suffering from slight deformity or crippling disease. In these cases a special report is sent to the central office and the parents are requested to bring the child to a welfare centre if one is within reach. A medical officer sees the child either at the centre or at home and recommends the appropriate treatment.

The work at the Hinckley orthopædic centre continued satisfactorily during 1937. When the clinic was opened in 1935 many cases attending had had little or no previous attention and a considerable proportion required in-patient treatment. During the past year, however, the number of in-patients has fallen.

An undesirable feature of the scheme is that adult cases of non-pulmonary tuberculosis referred to either the Hinckley or Coalville clinics do not receive the continuity of treatment which is so very necessary in a scheme of this nature. Coleshill Hospital, which is the parent hospital of these two clinics, only admits children and so arrangements have to be made for the in-patient treatment of adult cases of non-pulmonary tuberculosis at the City General Hospital, Leicester. On discharge these cases return for out-patient treatment to the orthopædic clinic nearest their homes. Thus at two clinics in the county, adult cases of non-pulmonary tuberculosis are under the continuous supervision of the same orthopædic surgeon and nursing staff throughout the whole period of treatment, while similar cases at the other orthopædic clinics do not receive the same advantage.

*Ascertainment of the number of Cripples.*

As mentioned above special arrangements are in force for the early ascertainment of deformities and crippling disease which has resulted in an increasing proportion of early cases being treated and cured.

The majority of the cases attending the county orthopædic clinics are referred from routine and special inspections by the assistant school medical officers and from the welfare centres by the medical officers in charge.

*After-Care Supervision.*

All children discharged from hospital attend the appropriate out-patient clinic where they are kept under continuous supervision and receive any further treatment that may be necessary.

During the year the organiser appointed by the Central Council for the Care of Cripples has been successful in forming a Voluntary Association at Coalville, the nucleus of which is composed of members of a previous association which ceased to function some years ago.

The Coalville Voluntary Association renders valuable assistance in transporting orthopædic cases to and from the clinic and in visiting the homes of those who failed to keep appointments made for them by the central office. The voluntary workers endeavour to persuade the parents to permit their children to attend the clinics and in the majority of cases their mission is very successful.

*Clinics and Hospitals.*

The following are the out-patient clinics with the respective parent hospitals included in the orthopædic scheme.

(*a*) *Coalville Clinic.*

This clinic is administered directly by the County Council and is open on two afternoons per week, Mondays and Wednesdays, from 1-30 p.m.

Treatment is in the hands of Mr. Allan, of Coleshill Hospital, who attends at one session per month when all new cases are examined and the treatment of those already in attendance is reviewed.

The staff consists of a fully trained orthopædic sister, an orthopædic nurse and a masseuse from Coleshill Hospital and a school nurse who takes charge of the clerical work, arranges appointments for the patients and keeps the records.

This clinic with the parent hospital at Coleshill forms a complete clinical unit for the treatment of all patients from the Coalville area.

(*b*) *Hinckley Clinic.*

This clinic is also administered by the County Council and is open for treatment on two half-days per week, Wednesdays and Fridays, from 9.30 a.m.

Mr. Allan, of Coleshill Hospital, attends the clinic at one session per month when all new patients are examined and the treatment of those already in attendance is reviewed.

The staff consists of an orthopaedic sister, orthopaedic nurse and a masseuse from Coleshill Hospital and a school nurse attends to the clerical work. The parent hospital in connection with this clinic is the Coleshill Hospital.

(*c*) *Leicester City Clinic.*

An arrangement exists between the County Council and the Leicester City Council for the treatment of county cases at the City Orthopædic Clinic, Richmond House, Leicester. The cases referred to this clinic are those living in county areas adjacent to Leicester.

All forms of out-patient treatment are available, the surgeon being Mr. Morris, orthopædic surgeon to the Leicester City Authority. The parent hospital in connection with this clinic is the City General Hospital, Leicester, where Mr. Morris is in charge of the orthopædic wards.

(*d*) *Loughborough Cripples' Guild.*

The Loughborough clinic is controlled by a Voluntary Association, the Loughborough Cripples' Guild, and payment is made to the association by the Leicestershire County Council and Loughborough Borough Council according to the number and nature of the treatments received by patients from their areas.

The staff consists of Mr. Malkin, orthopædic surgeon to the Harlow Wood Hospital, Nottinghamshire, who visits the clinic once a month ; an orthopædic sister who attends once a week from Nottingham, one masseuse who is employed whole time and four voluntary workers.

The clinic is open part of the week for massage and other forms of treatment.

The Loughborough Cripples' Guild is associated with the Nottingham Cripples' Guild and forms a complete clinical unit with the parent hospital at Harlow Wood.

*Work of the Orthopædic Clinics.*

(*a*) *Coalville Clinic.*

During the year 96 sessions were held and 2,068 attendances were made by children suffering from some form of crippling defect. Last year the corresponding figures were 97 and 2,239.

The types of treatment given were :—muscle re-education 716 ; massage 537 ; electrical treatment 611 ; radiant heat 80 ; sunlight treatment 127 ; application and supervision of splints 67 ; plaster treatment 91 ; dressings 88 ; and in addition, 358 general supervision and after-care examinations were made.

The number of children who attended was 143 and the average attendance per session was 21.5.

(*b*) *Hinckley Clinic.*

At this clinic 97 sessions were held and 1,682 attendances were made by children with crippling defects.

The types of treatment given were :—muscle re-education exercises 848 ; massage 293 ; electrical treatment 272 ; radiant heat 9 ; sunlight treatment 188 ; application and supervision of splints 52 ; plaster treatment 74 ; dressings 135, and 322 general after-care examinations were made.

The number of children who attended was 129 and the average attendance per session was 17.3.

(*c*) *Loughborough Cripples' Guild.*

The following treatment was given at this clinic to county cases :— exercises and re-education 10 ; plaster and splints 7 ; and 7 general supervision and after-care examinations were made. A total of 28 attendances were made at this clinic by county cases during the year.

The number of individual children who attended was 6.

(*d*) *Leicester City Clinic.*

During the year, 20 new cases were referred from the county to this clinic. Of these 15 were recommended for treatment. The number of attendances made for out-patient treatment was 359.

(*c*) *In-patient Treatment.*

The following is a summary of the cases who received in-patient treatment during the year.

| Hospital. | Boys. | Girls. |
|---|---|---|
| Coleshill Hospital .... .... | 14 | 12 |
| City General Hospital, Leicester | 5 | 3 |

Of the total of 34 cases admitted during the year 12 still remained in hospital on 31st December, 1937.

## XII.—OPEN-AIR EDUCATION.

Open-air schools are of very great benefit to the health of delicate children and should form an integral part of the school medical service. Unfortunately no such schools are provided in this county though there are many children who would benefit from a sojourn at an open-air school. As things are at present children whose general health is subnormal, who suffer from anæmia, debility or malnutrition or who are convalescing from illness are compelled to attend the ordinary schools where they work in a confined atmosphere during school hours.

The modern schools in the county have all been constructed on open-air lines and are a great improvement on the older schools at which delicate children are deprived of the fresh air and sunlight which are so essential to their well being, with the result that they are more susceptible to infectious and contagious illness.

Where open-air schools have been provided by other authorities the reports upon the benefit to the children have been enthusiastic and the cost has been considered to be justified. Even after a stay of a few months enormous improvement is noticed in both the physical and mental condition of debilitated and delicate children and they return to the ordinary school capable of benefiting from the educational facilities provided.

## XIII.—CO-OPERATION OF PARENTS.

It is gratifying to note the considerable number of parents who avail themselves of the invitation to be present at the routine medical examination of their children, which indicates a willing co-operation on their part. This is particularly useful when the entrant and intermediate groups of children are examined as they are too young to be able to give an accurate account of their previous history.

This goodwill and interest displayed by the parents is an indication of their appreciation of the benefits to be derived from the system of school medical inspection and fewer objections are raised to whatever necessary treatment may be recommended. Some parents, however, show reluctance to accept the advice given by the medical officer at the school and a little time spent by him in explanation or in elaboration of some point in connection with the child's health is worth while, particularly as a convert is often secured in consequence.

Parents may also obtain advice concerning the health of their children from the medical officer in charge of a school clinic and the numbers who patronised the clinics during the year show that the parents in the areas where the clinics are situated continue to make good use of the facilities available.

The use made of the school clinics by parents and teachers alike is encouraging and proves that a useful purpose is served. The potential educational value of the clinics is a definite factor in raising the standard of health of the children of the district.

## XIV.—CO-OPERATION OF TEACHERS.

Again it gives me much pleasure to record my appreciation of the co-operation and assistance received from the teachers in the county schools in supervising the health of the children. Whenever a medical inspection is carried out at a school the teaching staff, and particularly the head teacher, play an important part in the work by checking lists of names of children due for routine inspection, submitting names of children for special examination and completing the part of the medical inspection record card regarding age, standard, regularity of attendance, etc. At the actual inspection the teachers can be a great help to the medical officer, by seeing that the children are ready for examination when required and often by imparting confidence to the younger children.

The provision in the modern schools of a medical inspection room and accommodation for waiting parents, has made the work much easier and has considerably facilitated examination and diagnosis ; in addition there is a minimum of disturbance to the ordinary school routine.

In the smaller schools where the accommodation is limited a

certain amount of dislocation is bound to arise in spite of the fact that the medical officers endeavour to conduct the inspections with as little disturbance as possible.

I should like to take this opportunity of thanking the teachers in the schools of the county for their help and co-operation in the carrying out of the work of this department.

## XV.—CO-OPERATION OF SCHOOL ATTENDANCE OFFICERS.

The school medical and school attendance departments work in close co-operation. The school attendance officers report cases of prolonged absence from school and cases of physical and mental defect discovered in the course of their duties and which do not appear to have come to the notice of the medical officers.

Certificates are issued by the school doctors when required for school attendance purposes and on their recommendation children who are physically or mentally defective are placed in special institutions by the school attendance department. When necessary escorts for these children are provided from the staff of school nurses.

## XVI.—CO-OPERATION OF VOLUNTARY BODIES.

Each year a great deal of assistance and co-operation is received in different phases of the work from various voluntary agencies. In those areas in the county where such voluntary aid is available official schemes receive valuable support.

The medical officers receive a great deal of help from the N.S.P.C.C. in cases of child neglect, and also in those instances where the parents of children who require urgent treatment for a serious defect, which is causing unnecessary suffering and is a source of danger to health, are unwilling to have the treatment carried out. Every endeavour is made by the school medical staff to secure improvement but when all efforts fail, the case is referred to the N.S.P.C.C. who take legal action if necessary. The respect with which this society is regarded by a large proportion of the public often secures improved conditions for the children without recourse to drastic action.

The efforts of the county organiser of the Central Council for the

Care of Cripples have resulted in the establishment of a voluntary association for the care of cripples in Coalville. The nucleus of this association is composed of members of the old voluntary Committee which was disbanded some years ago. The association is made up of two main committees: the transport Committee who assist in transporting county orthopædic cases to and from the clinic, and a visiting Committee who visit the homes of patients failing to attend the clinic after several appointments have been made by the school medical department.

Other voluntary agencies to which the department is indebted include the Loughborough Cripples' Guild, the Voluntary Association for Mental Welfare and the Leicester Saturday Hospital Society.

I am greatly indebted also to the staffs of the Leicester Royal Infirmary, the Loughborough General Hospital, the Melton Mowbray War Memorial Hospital, the Market Harborough and District Hospital and the Cottage Hospitals at Hinckley and Lutterworth for their assistance with cases of crippling defects and their efficient work under the county scheme for operative treatment of enlarged tonsils and adenoids.

## XVII.—SUPPLY OF MILK TO ELEMENTARY SCHOOL CHILDREN.

Milk is still supplied to children in attendance at the schools (including secondary) in the county under the same arrangements as quoted in my previous reports.

All arrangements for the supply are made by the Agricultural Committee but the standard of the milk and condition of the premises of the producers must be approved by the school medical officer before the contract is finally completed.

Regular samples are collected from the schools and are submitted to the laboratory for bacteriological examination. Where a sample does not conform to the standard adopted by the Committee the agricultural department is notified and the producer warned. If no satisfactory improvement is forthcoming after repeated warnings, the contract is terminated.

All the samples were, up to the 31st December, 1936, examined by the plate count method, but from the 1st January, 1937, the methylene blue test was used.

During the year 538 samples of milk were collected and bacteriologically examined in the Laboratory. The results of these examinations are as follows :—

| | | |
|---|---|---|
| Satisfactory on both tests .... .... | 329 | (82.9%) |
| Not satisfactory on both tests .... .... | 17 | (4.3%) |
| Not satisfactory on methylene blue test .... | 15 | (3.7%) |
| Not satisfactory on coliform test .... | 36 | (9.1%) |

The majority of the milk supplied is either pasteurised or obtained from accredited farms. The supply of pasteurised milk has again increased during the year as several accredited producers have cancelled their contracts on the grounds that it is not a paying proposition.

In a number of schools in rural areas difficulties were experienced in obtaining supplies and during the year this question was considered at a joint meeting of the Medical Inspection and Agricultural Education (Joint) Committees. At this meeting it was reported that of the 278 elementary schools in the county, 208 were participating in the scheme and of the remaining 70 schools, 55 had less than 50 children on the rolls.

As an outcome of this meeting, it was decided to approve the supply of loose milk to children in attendance at these small schools subject to my approval.

It was thought that this concession would encourage the supply of milk in the smaller schools but unfortunately this provision was not taken advantage of and only two schools are receiving loose milk. In both cases the supply is of excellent quality and is delivered daily in a sealed container. The milk is distributed by the teacher with a suitable measure and each child receives one-third of a pint in a cup.

The following returns show the amount of milk supplied to the schools during the past six years :—

| | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 |
|---|---|---|---|---|---|---|
| No. of schools receiving milk .... | 174 | 179 | 201 | 209 | 211 | 237 |
| No. of children receiving milk .... | 6,870 | 6,600 | 18,503 | 14,058 | 13,672 | 15,169 |
| No. of bottles supplied weekly | 34,310 | 33,250 | 90,261 | 68,976 | 67,927 | 84,183 |
| No. of gallons supplied weekly | 1,430 | 1,385 | 3,761 | 2,873 | 2,829 | 3,507 |

As will be noted from the above figures the supply of milk has considerably increased during the year. The reasons for this increase are probably the supply of free milk to necessitous cases and the efforts of the agricultural department to obtain supplies for the children attending the smaller rural schools.

The number of children receiving free milk is 994, a definite increase on last year's figure of 605. All these children are examined and recommended by a medical officer before they receive the extra ration of milk.

It has not been possible so far to inspect all the children yearly but efforts will be made to examine as many as possible during 1938. This will make certain that these children are still suffering from some degree of malnutrition and require extra nourishment.

## XVIII.—HEALTH EDUCATION.

The Leicestershire Insurance Committee have again rendered valuable assistance in the campaign of health education conducted during the year in the schools in the county. National Health Week was observed as usual in October and talks on "Health and Cleanliness" were given by the teachers throughout the county.

Infant welfare exhibitions are held in various districts of the county and senior girls in attendance at certain schools are permitted to attend. The exhibitions are arranged by the superintendent health visitor under the auspices of the maternity and child welfare committee. The school nurse in attendance gives a short address on simple health matters such as cleanliness in the home, care and protection of food, etc. ; practical demonstrations are also carried out.

## XIX—PHYSICAL TRAINING.

Report of the organiser of Physical Education.

1.—*General.*

The year under review will be remembered as the year during which physical education made more real advance than in any previous year. The causes for this development are not far to seek. In the first place, head teachers, inspectors, administrators, Members of Parliament, and the general public have now realised the contribution which well-directed physical education can make to the

life, not only of the individual, but of the nation as a whole. In the second place, public interest has been stirred by the lack of facilities for recreative training for young people, especially for those who cannot afford admission fees to clubs and similar institutions.

It will be admitted that a healthy, robust, active body, under the control of the will, should be the possession of everyone. The first steps towards this ideal must be taken in the elementary schools.

The following report contains a brief resumé of what is being done at present in the schools of the county, with suggestions for future development.

The physical education of the children in the primary schools commences as soon as they are enrolled, and continues until they leave.

(*a*) *Infant Schools.*

In the infant classes at least one, and often two, short lessons are given each day. The main features of these lessons are enjoyment and movement, and interest is stimulated by the use of small improvised apparatus. In almost every infant school, lessons are conducted in the happy and informal manner suited to children in the early years of school life, and the standard of work is uniformly good throughout the county.

It is felt, however, that greater attention should be paid to the posture of the children ; the habit of standing as "thin as a pin" should be encouraged. Before the infants proceed to the junior classes they should be initiated into the elements of the "Team System."

(*b*) *Junior and Rural Schools.*

The Scheme of Physical Education, now in use in the county elementary schools, is based upon the syllabus issued by the Board of Education in 1933. The syllabus provides for all children of the primary school, and as the children advance from class to class, the tables of exercises are modified to suit the increased strength, skill and control, and the changing mental outlook.

It is satisfactory to be able to report that the teachers, encouraged in their efforts by the interest and enthusiasm shown by the children, have worked with keenness and patience, and that consequently steady progress is being made in primary schools.

Changing into suitable footwear, and in many cases into suitable dress, has brought greater freedom to both teacher and pupils ; movements are becoming more controlled ; response is more rapid and the range of movement is wider.

There are many teachers who have yet to overcome their diffidence in dealing with the 'group work' suggested at the end of the tables. This part of the lesson, in which sections of the class work under the guidance of their own leaders with the supervision of a teacher, is one of the most valuable features of the modern lesson. It is hoped that the teachers will make greater efforts to develop this section of the lesson.

It is pleasing to report that the majority of primary schools now give a daily lesson in physical training to all pupils.

(*c*) *Senior and Modern Schools.*

A break in the orderly progression of physical training appears at the age of 11 plus. Where re-organisation of schools has taken place, the pupils pass on to the modern schools where, in the majority of cases, a hall or gymnasium is provided with the apparatus appropriate to the development of the pupils ; in such schools the training is not interrupted. There are still, however, a considerable number of older children in all-standard schools and senior schools in older buildings where, owing to lack of halls, appropriate apparatus cannot be used. It is hoped that as re-organisation progresses and halls become available, the proper apparatus will be regarded as part of the essential equipment of senior schools. Even when all the senior schools are so equipped, conditions will still be less than ideal ; it is only logical that the privilege of a fully equipped gymnasium, now enjoyed almost exclusively by the pupils of the grammar schools, should be extended to all post-primary pupils.

The manner in which the teachers have brought both the letter and the spirit of the syllabus into the senior school curriculum, in spite of the limitation of suitable facilities, is deserving of highest praise. Changing into suitable clothing has considerably improved the tone of the lesson ; moreover, in those schools where only shorts are worn by the boys, such postural defects as hollow back, protruding shoulder blades and round shoulders, hitherto undisclosed, have been revealed, and can be dealt with. The increasing appreciation of the importance of physical training brings with it an ever increasing demand upon the teachers. Their interest and keenness have been well maintained, and there is evidence of purposeful effort in the

carrying out of the exercises. There is the danger, however, with the variety of exercises now at the teachers' disposal, that 'good form' may be sacrificed for spectacular and uncontrolled movements. Though variety of work is essential to the atmosphere of the lesson, the correct performance of the exercises is the main purpose. Boys are often required to perform "agility exercises" before the necessary movements leading up to such exercises have been mastered. It is only by the process of learning movements correctly that "good form" can be acquired. More concentration upon "good form" and posture, together with suitable corrections for those with postural defects will be required if the lessons are to fulfil their objective.

In the majority of these schools a daily period is given to some form of organised activity; three periods a week are given to physical exercises, and the remaining two to swimming, dancing and organised games.

(*d*) *Classes for Retarded Children.*

Re-organisation has brought into being separate classes for retarded children in the modern schools.

It is pleasing to report that head teachers of these schools are unanimous in their appreciation of the special value of physical training and activities for retarded pupils, and have allocated at least one, and often two, lessons each day to some form of physical activity for the backward class. Retarded children are often members of large families, and are considerably handicapped by undernourishment and unsuitable clothing. If full benefit is to be derived from their physical activities, it is imperative that suitable clothing should be worn. As their parents are frequently unable to pay half the cost of suitable clothing, it is hoped that the Committee will provide a small grant in order that plimsols, vest and knickers may be supplied to each child in the special classes for retarded children. There are at present 26 such classes in Leicestershire schools.

2.— *Apparatus.*

The benefits and the enjoyment of the new syllabus have been greatly enhanced by the provision by the Committee of apparatus for use during the physical training lesson. The supply has been greatly appreciated, not only by the pupils but by the teachers, to some of whom the task of finding, from local sources, 50% of the cost of apparatus has been exceedingly difficult. It is pleasing to note that the Committee have again provided in their estimates for the coming year for the further supply of apparatus.

3.—*Swimming.*

Swimming instruction has, of necessity, been confined to those schools within easy reach of swimming baths. In these schools swimming has become a recognised and well established school activity and would undoubtedly develop even more but for the lack of baths.

Arrangements for scholars to attend the baths were made on similar lines to those of previous years. The details of attendances are given in the following tables :—

| | No. of Classes. | | Total No. of Attendances. | |
|---|---|---|---|---|
| *Swimming Baths* | *Boys.* | *Girls.* | *Boys.* | *Girls.* |
| Oadby .... .... | 7 | 7 | 1,608 | 1,935 |
| Hinckley .... .... | 12 | 14 | 5,783 | 4,427 |
| Coalville .... .... | 19 | 16 | 5,317 | 5,022 |
| Loughborough .... | 5 | 5 | 2,418 | 2,345 |
| Market Harborough | 7 | 5 | 2,574 | 2,209 |
| Leicester .... .... | 16 | 14 | 2,296 | 1,986 |
| Ashby-de-la-Zouch .... | 2 | 0 | 467 | — |
| Melton Mowbray .... | 12 | 14 | 1,166 | 1,904 |
| | 80 | 75 | 21,629 | 19,828 |

| | |
|---|---|
| Total No. of Classes .... .... .... = | 155 |
| ,, ,, Attendances .... .... = | 41,457 |
| Total No. of boys who attended baths .... = | 2,150 |
| ,, ,, ,, girls ,, ,, ,, .... = | 2,368 |

The experimental "winter" class which was commenced last year at Hinckley proved a great success and similar classes are being continued this year.

4.—*Clothing and Footwear.*

In view of the emphasis which the modern practice of physical training places on agility and freedom of movement, it is imperative that children should be suitably clad and shod, when taking part in physical exercises and games. As few clothes as possible should be worn for reasons of hygiene as well as to allow unhampered movement.

In the modern schools and in many of the senior schools, changing into suitable clothing has become a general practice. The girls turn out for exercises in dark knickers, blouses, rubber shoes and no stockings, and the boys strip to shorts and vest, or shorts alone. In the junior and rural schools, the changing of clothing is less common, while in many of the smaller schools it is not practised at all. It is true that changing presents a difficult problem ; head teachers are often faced, not only with lack of funds for the purchase of suitable clothing, but with difficult parents. It is pleasing to note that the work of "educating" the parents is being undertaken by the teachers, and though progress is necessarily slow, there is evidence that the problem is being faced and excellent pioneer work is being done.

The way in which children dress for their physical training (and this, except for footwear, does not necessarily depend upon cost) is an indication of the value attached to it by a school, and not infrequently of what may be expected in actual performance.

5.—*Storage of Clothing.*

The introduction of changing for physical exercises has brought forward the problem of facilities for changing and the storage of clothing. Accommodation for changing is almost non-existent, except in the most recent school buildings, but here, again, it is found that where head and assistant teachers are keen enough, the changing is done either in the classroom or cloakroom, and that little is made of the inconvenience of such arrangements.

The question of storage presents head teachers with a more difficult problem. Various methods have been adopted, but none of these may be termed satisfactory, in view of the obvious desirability that the clothing should be dried and aired before being used again. Some schools use storage bags, in which each child keeps vest, knickers, and shoes at school ; others keep their "kit" in locker desks ; others make small bundles which are suspended from the backs of seats : while the children in many schools carry their "kit" to and from school daily. If the full value of changing into suitable clothing is to be acquired by the scholars, it is desirable that such clothing should be kept at school, and suitable provision made for its storage. At the present time, experiments are being carried out with various types of receptacles and it is hoped that in the near future a solution to this problem will be found.

6.—*Provision of Physical Education for those who have left school.*

Interest in and the demand for physical training by the general

public throughout the county is evident by the increasing demand for evening classes. The inauguration of the national "Keep Fit" movement, culminating in the formation of a Central Council of Physical Training, has brought with it a demand for "recreational" and "keep fit" classes. Leicestershire's contribution to this national effort has been the provision of classes in physical training, "keep fit," and recreational training ; the two former are held under and conform to the regulations of the county evening institutes, while the latter have been independently organised.

Senior students of evening institute classes have to pay an admission fee of 5/-, and those under sixteen a fee of 1/- which is returnable if 90% of attendances are made. All are subject to registration. Members are admitted into the recreational classes without payment, and are free to attend when they desire to do so.

(*a*) *Evening Institutes.*

The attendance at the evening institute classes has been well maintained, and the work of the class leaders is appreciated by all who attend. Many students, however, who are interested in physical training only are prevented from joining the physical training class, owing to the Committee's condition of entry to evening classes that a "group" course must be taken.

The "keep fit" type of class provides facilities for recreative training for women. Exercises performed to music, and various types of dancing — country, Scandinavian, and national—are the main features of the work taken. The classes are subject to the regulations that govern evening institutes except that the members are not required to take other subjects.

There are now 30 centres established throughout the county, with a total of 60 classes, men and women, working under the Committee's scheme for evening institutes.

(*b*) *Recreational Classes.*

The recreational classes, six in number held in different parts of the county, were primarily formed with the object of providing training centres for students attending Loughborough College, who, it is hoped, will become leaders of recreational activities under the National Advisory Council of Physical Education and Recreation. These classes differ from those controlled by the evening institutes inasmuch as the work undertaken is voluntary. The classes are attended by men and youths, who are interested in such activities

as boxing, wrestling, athletics, football, camping, etc. The aim of recreational work is to interest the members of the classes in "personal fitness" and to provide the necessary guidance through the services of a qualified "Leader." As these classes have only recently been formed, it is not possible at this stage to report upon them.

It is suggested that classes in physical education—gymnastics, "keep fit," and recreational training—be organised for students who are 21 years of age and over, and that such classes be kept outside the official regulations. Such classes should be self-supporting, enjoying the privileges of using the halls and schools controlled by the Committee.

7.—*Out of School Activities.*

The ever increasing work undertaken by the voluntary associations has included the organisation of inter-house, inter-school and inter-area contests in football, cricket, athletics and swimming.

Evidence of the importance now given by the county teachers to the physical activities of their pupils is seen in the increasing number of schools whose out-of-school activities include cycling, hiking and summer school camps.

It is hoped that in the near future the Committee will grant permission for the establishment of two permanent school camps in Leicestershire.

D. MILLER.

*Organiser of Physical Education.*

## XX.—BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

(1) *Physically Defective Children.*

As in previous years the names of all physically defective children are entered in a special register which is kept at the central office in Leicester. A certain proportion of the time of the medical officers is allotted to the re-examination of children who are suffering from severe physical defect of such a nature as to interfere with their ordinary activities at school. The register is kept up-to-date not only by the addition of fresh cases but by the re-examination at intervals, of all children whose names are already on the register.

The register now contains a reasonably complete return of all physically defective children in the county and knowledge is available with regard to the progress or retrogression of every child registered.

The cases are classified as follows :—

| | Males | Females | Total |
|---|---|---|---|
| Blind or Partially Blind .... | 12 | 9 | 21 |
| Deaf or Partially Deaf .... | 8 | 10 | 18 |
| Anterior Poliomyelitis .... | 35 | 36 | 71 |
| Spastic Paraplegia .... | 11 | 11 | 22 |
| Congenital Deformities .... | 16 | 11 | 27 |
| Torticollis .... .... .... | 3 | — | 3 |
| Rickets .... .... .... | 4 | — | 4 |
| Scoliosis .... .... .... | 7 | 10 | 17 |
| Osteomyelitis .... .... | 5 | 1 | 6 |
| Muscular Dystrophy .... | 7 | 2 | 9 |
| Heart Disease .... .... | 10 | 27 | 37 |
| Talipes .... .... .... | 14 | 6 | 20 |
| Birth Palsy .... .... | 7 | 3 | 10 |
| Injuries .... .... .... | 7 | 3 | 10 |
| Miscellaneous .... .... | 19 | 10 | 29 |
| TOTALS | 165 | 139 | 304 |

(2) *Tuberculosis.*

All cases of tuberculosis amongst children discovered by school medical officers, tuberculosis officers and general practitioners are recorded on a card index system at the central office.

Contacts of tuberculosis are examined by the assistant school medical officers in the course of their routine school work.

(3) *Mentally Defective Children.*

(*a*) *Ascertainment.*

As in the case of physically defective children, a certain amount of the medical officers' time during the year has been devoted to visits to homes and schools for the purpose of carrying out examinations and re-examinations of mentally defective children referred to the school medical department by teachers, school nurses and by the organisers of special classes.

The register of these children is kept up-to-date by means of these examinations and forms a fairly complete record of the incidence of mental defect amongst the school children of the county.

(*b*) *Provision for the Mentally Retarded.*

Considerable progress has been made during the year with regard to the establishment of special classes for mentally retarded children.

The number of classes has increased from 16 in 1936 to 28 during the present year, thus a large number of children are now provided for. The classes average twenty to twenty-five children and are all held in the modern and senior schools. In primary schools the mentally retarded children are dealt with individually by the organiser. There are now ten teachers in charge of special classes who have attended courses arranged by the Central Association for Mental Welfare and are thus equipped with the special knowledge which is essential in the teaching of this type of child.

In many of the larger schools children have been tested as to their educational attainments and mental ability, but it has not been possible to establish further classes owing to the lack of accommodation and staff.

The record cards of the children taught in special classes show that steady progress has been made during the year.

Two organisers are now employed whole time in the county, one dealing with the children in attendance at junior schools and the other organising the work of the special classes.

The I.Q. of each child is assessed by a medical officer, and in addition an annual standardised test is given by the organiser to ascertain the educational ratio. A special record card is kept up-to-date and used throughout school life.

As no special classes are held in the junior schools the organiser tests the mentally retarded children periodically and suggests methods of instruction on suitable individual work.

(*c*) *Provision for the Mentally Defective.*

Mentally defective children who are classified as feeble-minded (ineducable), imbeciles or idiots, are notified to the Mental Deficiency Act Committee who undertake responsibility for their future care.

Provision is made for the care of mental defectives at Stretton Hall, near Leicester which is administered by the Mental Deficiency Act Committee.

(*d*) *The work of the Voluntary Association for Mental Welfare.*

Twenty-five of the names added to the register of the Voluntary Association during 1937 were those of children between 7 and 16 years of age.

By the end of the year, three of these children, all boys, had been transferred from approved schools to certified institutions under Orders made by the Secretary of State ; one girl was certified under the Mental Deficiency Acts at the request of her parents and admitted to Stretton Hall. Three of the children joined occupation centres, and one was receiving individual training by the Association's Home Teacher. One boy, who had been a "problem" at home, was admitted to an approved school, another to a residential special school, and a third was awaiting a similar vacancy. Five children, who had been notified to the Statutory Committee by the Education Authority as "ineducable" were under Statutory supervision. Three were still attending elementary schools and 5—of whom one was referred to the local Cripples' Association—were not at school. One name was removed from the register, the patient being in a certified institution and maintained by another authority which had requested a report on the home conditions.

As in previous years, the Association has been glad to provide escorts for special school children, admitted, discharged or returning home on holiday. The Association keeps in touch with all special school children by sending Christmas cards and occasional letters. In this way, the child and his parents come to regard the Association as a friend, which makes it all the easier to follow up and advise later on when the child attains the special school-leaving age of 16.

The occupation centres at Coalville, Hinckley and Loughborough continue to meet the needs of local children and older defectives for whom institutional care is unnecessary or not desired at the present time. The children attend so willingly that the difficulty often is to keep them away when they are really not well enough to attend, and frequently the mothers sigh when the holidays come "What am I to do with so and so while the centre is closed?" At one centre, where term always re-opens on a Monday, for the benefit of a child who can only attend certain days a week, the children consider they have

stolen a march on the elementary school children who return a day or so later. By the courtesy of the school medical department, medical inspections were again held in 1937.

## XXI.—SECONDARY SCHOOLS.

(1) *Medical Inspection.*

The number of secondary schools remains the same as last year namely 14. Seven of these are maintained by the Authority and seven are non-provided but aided.

The approximate number of children on the rolls of the provided schools is 1,482 and in the aided schools 1,987—a total of 3,469.

Routine medical inspections are carried out each year by the medical officers and all specials and children requiring re-examinations are examined at the same time. A lady medical officer undertakes this work at the girls' schools.

No following up is undertaken in connection with children referred for treatment beyond the notification of the parents that certain defects require treatment and a recommendation that they should consult their own medical attendant.

This year the number of routine inspections has increased to 1,539 due to the fact that the examination of the scholars at two schools was postponed from the end of last year and these children were inspected early in the year under review.

The number of children requiring treatment was 291 and the percentage, approximately 19.

The most prevalent defects are defective vision, flat foot and enlarged tonsils and adenoids.

(2) *Medical Treatment.*

No treatment is provided by the Authority.

## XXII.—EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

The employment of children in the county is regulated by bye-laws ; no child being allowed to undertake employment before school hours except in certain classes of work.

All children are medically examined on applying for an employment certificate. In order to minimise the delay between the time of application and the examination, arrangements are made for the applicants to attend the various school clinics.

During the year, 218 certificates were granted :—

| | |
|---|---|
| Errands .... .... .... .... .... | 48 |
| Delivery of newspapers .... .... .... | 156 |
| Delivery of milk .... .... .... .... | 8 |
| Other permitted duties .... .... .... | 6 |

Arrangements have been made whereby the Juvenile Employment Exchange are notified of any child who for any abnormal physical or mental condition is thought unfit to undertake certain forms of employment. A record of these cases is kept and the children are re-examined periodically ; the certificate being forwarded to the employment authorities when the child leaves school.

## XXIII.—HYGIENIC CONDITIONS OF ELEMENTARY SCHOOLS.

The system, instituted in 1932, of making an annual survey of the hygienic conditions of elementary schools, was continued during 1937. The method has been fully described in previous annual reports, and needs but a briet reference here. Each assistant school medical officer, when carrying out routine medical inspections, makes a report upon the condition of the premises on a special form, particulars of which were given in last year's annual report. These returns are scrutinised by the senior assistant school medical officer, and any defects or recommendations are noted, and, if serious or urgent, are reported to the Building and Sites Department.

During 1937, a total of 417 reports upon schools inspected was made by the assistant medical officers. Of these, 166 were completely satisfactory, the remainder recording various defects, many of them of a trivial nature. Altogether, 81 reports on schools were referred to the Building and Sites Department. The defects, in order of frequency, are set out below.

Summary of Defects Referred to Appropriate Department :—

| | |
|---|---|
| Sanitary Conveniences requiring alteration or repair | 24 |
| Playground—inadequacy ; disrepair .... .... .... | 21 |
| School furniture—broken, insufficient or wrong type | 19 |
| Dangerous conditions—various .... .... .... | 7 |
| Heating system inadequate .... .... .... .... | 6 |
| Cloakroom accommodation inadequate .... .... | 6 |
| Water supply inadequate .... .... .... .... | 6 |
| General repairs required .... .... .... .... | 5 |
| Washing accommodation inadequate .... .... .... | 3 |
| Floors—disrepair .... .... .... .... .... | 3 |
| Deficient air entry .... .... .... .... .... | 2 |
| Leaky roofs .... .... .... .... .... .... | 2 |
| Lighting insufficient .... .... .... .... .... | 2 |
| Cleanliness of floors and windows unsatisfactory .... | 1 |
| Fire Extinguisher required (one not sufficient) .... | 1 |
| Total Defects .... .... | 108 |

At first sight it may seem strange that in the sixth annual survey, so many defects should have been reported. The truth is, however, that as conditions have improved from year to year, it has been possible to raise the standard of fitness to a fairly high level. Gradually the general condition of school premises approaches more nearly to the ideal, and at the present time the majority of the more serious defects are in older buildings, which will, in course of time, be replaced.

The importance of making school buildings an object lesson in practical hygiene has been pointed out so often that it needs little emphasis to-day. The irony of a teacher attempting to teach the importance of good ventilation, lighting and cleanliness in an antiquated and unhealthy classroom must be apparent to all.

Perhaps the most important factor from this point of view is the provision of adequate washing accommodation. Only three cases of insufficient facilities for washing were reported during the year, but it is to be feared that our standards in this respect are

too low. If one wash-basin to twenty-five children be accepted as a reasonable standard, comparatively few schools would pass the test ; but apart from this, an unattractive basin with a cold tap, and a damp and dirty towel, cannot be very conducive to personal cleanliness, even if the provision would pass a numerical test of sufficiency. Teachers should make an effort to ensure that an adequate number of towels are provided, and that these are changed frequently.

The following table summarises the repairs and improvements which have been carried out during the year :—

| | |
|---|---|
| Heating improvements .... .... .... | 7 |
| Playgrounds tarpaved and repaired .... | 28 |
| Electric light installations .... .... .... | 11 |
| Conversion of out-offices to water carriage system .... .... .... .... .... | 3 |
| Installation of water supply .... .... .... | 5 |
| General improvements .... .... .... | 1 |
| New flooring .... .... .... .... .... | 12 |

The willing co-operation of teachers in the making of the year's survey has been greatly appreciated by the medical staff.

## XXIV.—SPECIAL ARTICLES.

### (1) RHEUMATIC DISEASE IN CHILDHOOD.

#### Preliminary Considerations.

(*a*) *Statistics.*

Sir George Newman, late Medical Officer of Health of the Board of Education and Ministry of Health, has stated that "Organic disease of the heart is for the most part rheumatic in origin, and organic disease of the heart is the cause of over one-third of all deaths in England and Wales."

Special reference is made to the various manifestations of rheumatism amongst the child population of the country in the annual reports of the chief school medical officer of the Board of Education.

Table I. below gives the number of deaths from rheumatic fever and heart disease during the period 1929-1936. These figures may not appear exceptionally large in proportion to the total number of children in the country, but they certainly indicate a relatively high incidence of rheumatic disease, the number of deaths being small compared with the number of children affected. Many children suffer from heart defects which, though not incapacitating them seriously at the time, often prove fatal in later life.

**TABLE I.**

**Deaths from Rheumatic Fever and Heart Disease at ages under 15 years in England and Wales during the years 1929-36.**

| Year. | 0-5 yrs. | | 5-15 yrs. | | Under 15 yrs. | |
|---|---|---|---|---|---|---|
| | Rheumatic Fever. | Heart Disease. | Rheumatic Fever. | Heart Disease. | Rheumatic Fever. | Heart Disease. |
| 1929 | 55 | 60 | 486 | 848 | 541 | 908 |
| 1930 | 50 | 76 | 506 | 795 | 556 | 871 |
| 1931 | 42 | 71 | 401 | 737 | 443 | 808 |
| 1932 | 35 | 60 | 342 | 630 | 377 | 690 |
| 1933 | 58 | 49 | 435 | 722 | 493 | 771 |
| 1934 | 51 | 62 | 479 | 831 | 530 | 893 |
| 1935 | 52 | 47 | 388 | 752 | 440 | 799 |
| 1936 | 24 | 69 | 384 | 611 | 408 | 680 |

The serious after-effects of rheumatism on the heart are of primary importance and in addition to this disease being one of the most disabling from which the child may suffer it produces a high mortality rate in later life.

During school life, the greatest incidence and mortality occurs in the second half of that period, and in his report of 1935 the chief school medical officer of the Board of Education gives some interesting details. He states, for example, that in 1934 sixteen per cent. of all deaths occuring in children between the ages of 10 and 15, may be attributed to acute rheumatic infection. This figure of 16 per cent. is comparable with 9.5 per cent. of deaths in the same age period due to diphtheria, 14.7 per cent. due to all forms of tuberculosis, 8.4 per cent. due to pneumonia, bronchitis and other respiratory disease (apart from tuberculosis) and 10 per cent. to all forms of accident and violence.

Except for temporary recrudescences the mortality from rheumatic fever at all ages shows a desending curve since records were first kept. It does not necessarily follow, however, that there is a corresponding decline in the incidence ; in fact it is probable that the number of cases of rheumatic disease has remained stationary or has slightly increased since the beginning of this century. During this period there has been a steady rise in the number of deaths at all ages from heart disease and though a percentage of these are known to be the direct result of rheumatism, this disease is no doubt responsible for many deaths where the association is not so obvious.

The Minister of Health has stated that rheumatism, this "cruel enemy of mankind," causes no less than one-sixth of the industrial invalidism in the United Kingdom and that its cost to the National Health Insurance funds is estimated at over £5,000,000 annually.

(*b*) *Cause and Prevention.*

Rheumatic disease is for convenience divided into juvenile rheumatism and adult rheumatism or rheumatoid arthritis, though this classification is probably not scientifically correct. Until recently these were considered two aetiologically distinct conditions, but the modern view is that they are in reality two different manifestations of the same disease, the true cause of which is at present unkown. In half of the cases of rheumatoid arthritis in adults the heart is found to be affected, which indicates a previous attack of rheumatism during childhood.

Alternative theories are advanced from time to time as to the cause of the "rheumatic state" ; damp house, some deficiency in the diet, defective hygiene, exposure, infection and allergy being some of the alleged predisposing factors.

Rheumatic fever is the severe form of juvenile rheumatism and one which produces the greatest mortality. The child is usually very ill and confined to bed. In milder attacks "growing pains" or small round swellings which can be felt under the skin may be the only initial symptoms. Whatever the type of onset, or however mild, later complications frequently occur, the chief ones being chorea and heart disease.

The incidence of rheumatic disease is higher among the poorer sections of the community, probably due to inferior housing and hygienic conditions. Strangely enough, however, the very poor appear to be relatively insusceptible.

Prevention of acute rheumatism and resulting heart disease has been discussed in detail by the chief medical officer of the Board of Education in his annual report for 1935. He states that "The prevention of acute rheumatism and the heart disease arising therefrom is recognised as one of the principal aims of the school medical service, and it is remarkable that while some local authorities have made great efforts to deal effectively with it, many with an otherwise efficient school medical service have done little in this matter."

In spite of the fact that the causation of rheumatism is imperfectly known at present, some steps can and are being taken on preventive lines. The following is a summary of the chief provisions in the schemes adopted :—

(i) Early ascertainment.
(ii) Accurate diagnosis.
(iii) Rheumatism clinics.
(iv) In-patient treatment in hospital.
(v) Day schools and residential accommodation for children whose hearts have been permanently damaged.
(vi) After-care and supervision for those children who have resumed normal school life.

(*c*) *Conclusion.*

I feel sure that the above brief remarks will, without further elaboration, suffice to convince even the most sceptical that the

prevalence of rheumatic disease is a problem requiring serious consideration.

Early in 1937 I decided to carry out an investigation in order to ascertain the incidence of this disease among the school children in Leicestershire. The investigation will not be completed until 1938, but it is possible to give some details with regard to the figures so far collected.

### Special Investigation in Leicestershire.

As seen above an appreciable number of the deaths from heart disease are probably due to rheumatism and undoubtedly in many of these cases the disease originated during childhood.

A study of the vital statistics of the county reveals some interesting facts. Deaths from heart disease for instance as Table II. shows, have trebled during the past forty-six years. It is also notable that since the beginning of this century the deaths from cancer show a similar increase. During the same period the death rate from phthisis has fallen by a third and the zymotic death rates all show a decline since records were first kept. Thus, excepting heart disease and cancer, mortality figures as a whole show a decline. With regard to these two exceptions, however, the increase in the death rate is alarming and gives definite cause for concern.

### TABLE II.

**Decennial averages of the deaths from Heart Disease in Leicestershire.**

| | 1890-1899 | | 1900-1909 | | 1910-1919 | | 1920-1929 | | 1930-1936 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Rate per 1,000 | No. | Rate per 1,000 | No. | Rate per 1,000 | No. | Rate per 1,000 | No. | Rate per 1,000 |
| Heart Disease | 265 | 1.21 | 320 | 1.35 | 332 | 1.35 | 423 | 1.53 | 679 | 2.24 |

In order to obtain some indication of the incidence of rheumatic disease amongst the child population in the county, the head teachers of all the schools were circularised and asked to furnish the names and addresses of any children attending who were suffering, or had suffered, from heart disease, rheumatic fever, rheumatism, chorea or "growing pains." A total of 1,259 names were returned, classified as follows :—heart disease 299, rheumatic fever 105, rheumatism 381, chorea 184, growing pains 290.

The next step was to investigate each case individually. This is being undertaken by two of the assistant school medical officers in the course of their routine and special inspections. A special form is provided on which are entered such particulars as ; general health, nutrition, condition of the heart, duration of the manifestations of rheumatic disease and the age at which they were present, condition of nose and throat, family history, etc.

Up to the end of the year, the school medical officers had examined 864 children in connection with this special investigation. A small number of the children were found to be perfectly normal and to have no definite history of rheumatism, the alleged rheumatism or growing pains being due to some simple cause such as a sprain or the muscular pains of influenza.

Approximately half of the children examined were referred by the school medical officers for treatment or observation as a preliminary measure, in most cases because of the rheumatic diathesis, and in a few on account of unassociated conditions. The rheumatic manifestations include all instances of heart disease but only the more severe cases of rheumatism and chorea. The comparatively large number of enlarged tonsils and adenoids is not surprising, since they predispose to rheumatism. Table III. below gives these figures in detail.

## TABLE III.

**Defects referred for treatment or observation in the year ending 31st December, 1937, as a result of the investigation into Rheumatic Diseases.**

| | For Treatment. | For Observation. |
|---|---|---|
| Heart disease : | | |
| Organic .... .... | 3 | 117 |
| Functional .... .... | — | 1 |
| Rheumatism .... .... | 4 | 176 |
| Chorea .... .... .... | 6 | 32 |
| Tonsils .... .... .... | 17 | 79 |
| Adenoids .... .... .... | 3 | 2 |
| Tonsils and adenoids .... | 8 | 4 |
| Anæmia .... .... .... | 6 | 4 |
| Asthma .... .... .... | 1 | 2 |
| Deformities .... .... | 2 | 4 |
| Otitis media .... .... | 2 | — |
| Epilepsy .... .... .... | 1 | — |
| Skin diseases .... .... | 1 | — |
| Other diseases or defects .... | 2 | 22 |
| | — | — |
| TOTAL | 56 | 443 |

Of the 864 inspection forms completed by the assistant school medical officers up to the end of the year, 400 were taken at random for the purpose of analysis—187 relating to boys and 213 to girls.

When the forms selected were classified, it was found that 51 boys and 43 girls were suffering from defects which could not, with certainty, be attributed to rheumatism and for the purpose of this investigation these cases were disregarded. I have, therefore, concentrated on the remaining 306 cases—136 boys and 170 girls—where the rheumatic manifestations were definite. The histories of these children were carefully examined and the results of the findings are classified, together with the rheumatic symptons, in Table IV.

## TABLE IV.

**Incidence of the manifestations, complications, some predisposing conditions and normal life impairment in Rheumatism, based on a total of 306 children examined—136 boys and 170 girls.**

| | Boys. | | Girls. | | Total. | |
|---|---|---|---|---|---|---|
| | No. | per cent. | No. | per cent. | No. | per cent. |
| MANIFESTATIONS— | | | | | | |
| Rheumatic pains .... .... | 107 | 78.7 | 131 | 77.1 | 238 | 77.8 |
| Rheumatic fever .... .... | 24 | 17.6 | 26 | 15.3 | 50 | 16.3 |
| Chorea .... .... .... | 24 | 17.6 | 47 | 27.6 | 71 | 23.2 |
| Rheumatic heart disease .... | 18 | 13.2 | 27 | 15.9 | 45 | 14.7 |
| PREDISPOSING CONDITIONS— | | | | | | |
| Subnormal nutrition .... | 31 | 22.8 | 30 | 17.7 | 61 | 19.9 |
| Diseased tonsils & adenoids | 27 | 19.9 | 27 | 15.9 | 54 | 17.6 |
| Damp house .... .... | 32 | 23.5 | 44 | 25.9 | 76 | 24.8 |
| Family history of rheumatic disease .... | 58 | 42.6 | 73 | 42.9 | 131 | 42.8 |
| IMPAIRMENT OF NORMAL LIFE | 32 | 23.5 | 40 | 23.5 | 72 | 23.5 |

Rheumatic manifestations occurred either singly or combined, rheumatic pains having the highest incidence, followed numerically by chorea, rheumatic fever and heart disease as seen in Table IV. The most striking feature in this table is the higher incidence of chorea amongst the girls. It is not desirable however, to arrive at any definite conclusions until the investigation is complete.

It is interesting to note the relatively high incidence of the factors predisposing towards rheumatic disease. The family history of rheumatism in almost half of the cases is particularly noteworthy and may be due to either inherent or environmental influences. It has for instance been established in similar studies carried out elsewhere that in certain districts the incidence of rheumatic disease is higher than in others and there appears to be some connection between this disease and water courses. This interesting and important aspect of the problem will receive attention before the investigation is completed. In some cases two or more of the predisposing conditions

appear together, for instance, a family history of rheumatic disease and a damp house are often associated.

In practically one quarter of the cases reviewed the normal life of the child was impaired because of one or more of the conditions predisposing to rheumatism.

*Summary.*

(1) It is computed that a large proportion of organic heart disease is rheumatic in origin and that organic heart disease is the cause of over one-third of all deaths in the country.

(2) In Leicestershire the deaths from heart disease have trebled in the past forty-six years thus indicating a probable increase in the incidence of rheumatism.

(3) Of the 1,259 children reported by head teachers as suffering, or having suffered, from rheumatic disease, probably approximately 1,000, will be confirmed by the assistant school medical officers when this investigation is complete.

(4) Normal life is impaired in approximately 25 per cent. of the cases reviewed. The nature of this impairment is such that in most cases the disability will persist throughout life.

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## (2) HEALTH EDUCATION AND THE SCHOOL CHILD.

With the National Fitness Campaign in full swing, the present is an appropriate time to review the position of health education in the school. A glance through the school annual reports for the last ten years would suggest that education in health is not a very prominent part of the curriculum at present. More than that—one is left with an uncomfortable feeling that it is rather like a duckling in a brood of chickens—a foreigner, not fully understood, tolerated, but, on principle, not to be encouraged.

It is a truism to say that education should be a preparation for life. It should, therefore, be designed by those who know life best, to give the child the best possible training for the business of living. Most people nowadays will agree with this proposition—but it was not always so. Education began as one of the fine arts, divorced from the practical side of life—and this tradition has continued down the ages. Knowledge was sought for its own sake. Reading, writing and arithmetic were not, in the beginning, taught because they would help the merchant or the craftsman ; they were rather, the privilege of the scholar, living apart from the cruder world of practical things. One has only to think of the illuminated manuscripts of the middle ages, or the work of the early grammar schools, to realize that education has not always been intended as a preparation for the business of life.

It is, in fact, only recently that there has been a general outcry about the "unpractical" subjects which children are taught at school. To-day, one hears it on every side ; from Mr. H. G. Wells to "Fifth Form Schoolgirl," everybody seems prepared to take upon themselves the re-organisation of the school curriculum. The reasons for this are not far to seek, being principally, first, the increasing competition in business and the professions, and second, the enormous widening of the field of knowledge during recent times, which has made it more difficult for anybody to do more than touch the fringes of it. It is no longer possible to treat all knowledge as worthy of pursuit for its own sake ; specialisation is the order of the day, and in the scramble for lucrative posts, only the practical man or woman stands a chance of getting anywhere.

The time is ripe, then, for taking stock. It is not enough to raise the school leaving age, or to make minor changes in time-tables.

This has been done already. Less time is spent, nowadays, on subjects like the dead languages, advanced mathematics, and certain aspects of history, and more on physical training, handicrafts, and domestic subjects. But much of this is mere patching. What is needed is a change of attitude, a programme and a policy with a span much wider than the years between entering and leaving school.

The trouble with the re-organisation of education is that while there is general agreement that "something should be done," each of us has his own particular pet subject which, we hold, should be given prominence before all others. Most people will agree, however, that if education is to be more closely related to life, the promotion of health should be a prior consideration. I have spoken to teachers who readily agreed that hygiene is an interesting and useful subject of study, but said that their time-tables were so overcrowded already that they were unable to give it the attention it deserves. This is faulty reasoning. The place for health education should be decided first, and the other subjects be fitted in afterwards. In this year of grace I am not likely to be called a fanatic for being dogmatic upon this point.

The present position is most unsatisfactory. It cannot be said that the school child does not receive any "health" education. He receives too much—of the wrong kind. The hoardings tell him what is good for him, what to eat for energy, how to avoid night starvation ; the newspapers prescribe remedies for nervous exhaustion, dreadful stomach pains, eyestrain, sleeplessness ; the Sunday wireless programmes voice the claims of one necessity of life after another. If Truth were the goddess of commerce, it would be hard to see how, in the world of to-day, one could avoid being healthy. To combat this barrage of lies, inaccuracies and over-emphasis, what are we doing ?

Let us review the education in health which the average school child receives through orthodox channels. From the beginning, and continuing throughout his youth, there is the influence of the home. The example of his parents' mode of life is, probably, the most important piece of health education which he receives, and in the average case it is not a conspicuously good one. To mention an isolated but significant point, the majority of houses in rural districts do not possess a bathroom, and proper cleanliness can only be achieved in such surroundings after surmounting difficulties which must make it seem an unnatural and, probably, an unattractive condition. The home dietary is not, usually, a good object lesson

in practical dietetics. Faulty habits in clothing—particularly the almost universal tendency to over-clothing—are taught from the earliest years. The parent, who has no knowledge of physiology, cannot teach his child the mere rudiments of sound hygiene principles —in particular, he is not only unwilling, but is unfitted to tackle the subject of sex.

The child goes to school. Here, if he is lucky, he learns something about the structure of his body and some of the so-called "Rules of Health." Enlightened teachers will admit that this teaching is often given in an uninspired manner, by teachers who have but an imperfect knowledge of the subject, and that the whole thing is liable to be rather a bore. Exceptionally, hygiene occupies a reasonably prominent place in the curriculum, and an enthusiastic teacher infuses it with the interest which is natural to a subject which can be fascinating when properly handled. At the best, however, the system falls far short of the ideal. Teaching of hygiene is begun too late in the child's school life, and it is looked upon as "an extra." The course is too short and elementary to have a great influence on the child's mind, and many aspects of health are barely touched upon—disease and its prevention, eugenics, sexual physiology, everyday psychology, infant care, dietetics. Girls are slightly better off in this respect than boys, and often receive a certain amount of teaching in domestic science—but upon the whole, such training is sadly insufficient.

Recently, in his annual reports, the chief medical officer of the Board of Education has pointed out what is being done in certain areas where special attention is paid to the teaching of hygiene—but even in the most progressive districts this fundamental subject seems to be treated as an "extra," to be disposed of in a few lectures and demonstrations. In Leicestershire, it is true, much more is done than seems to be the case in many areas. Hygiene is taught as a special subject in practically all modern and central schools, and in the remainder forms a part of the "science" course. Definite consideration is given to the subject, and the attitude of teachers is interested and sympathetic. All schools have a copy of the Board's "Handbook of Suggestions on Health Education," upon which their courses are largely based. General biology is taught in some schools, but sex hygiene is seldom touched upon. In addition, as mentioned in recent school annual reports, the Leicestershire Insurance Committee, in conjunction with the Health and Cleanliness Council, gives assistance to teachers by supplying poster material and subject

matter for talks, and senior girls visit infant welfare exhibitions when such are available. Domestic Science is taken by all senior girls, and includes cookery, laundry work and housewifery, the minimum course being about 200 hours, and the maximum, 400 hours. It is worth noting that this course includes simple first aid, a lesson on the care of the sick room, and two lessons on invalid cookery. In addition, a course of infant welfare usually comprising six lessons of one hour each (occasionally a full term) may be included. Obviously, a great advance has been made in this county since 1927, when the result of an enquiry on health teaching, circulated to the elementary schools, was far from satisfactory.

To continue our story of the average case. The child leaves school, marries, has children. If a man, his further education is left to the school of experience. His wife is a little more fortunate. At the ante-natal clinic, infant welfare clinic or women's institute, and through the ministrations of the health visitor, in the home, she gets a certain amount of useful advice, and an intelligent woman can soon build up an adequate knowledge of infant care and household management. But on the average, help from official sources comes too late. Habits of thought and action are not easily broken, and much of the advice must fall upon barren ground.

So the cycle goes on. Unenlightened parents beget children who grow up in an unsuitable environment; slow improvement takes place in spiral fashion, and all we can do is to tinker with a problem which we have never made a serious attempt to solve.

What is the solution ?

The first step is to realize that a policy of patching and re-decoration is not enough. Re-building over a long period of years is necessary, and to do this we must have a plan clearly in our minds, so that each slight change shall contribute to the ideal we are striving after.

Gradually health education must attain to its proper place, its teaching begun at the earliest possible period of school life. A co-ordinated system of teaching, an integral part of the curriculum, will carry the child from step to step, until after he leaves school his interest in hygiene as a living science will continue throughout life. I do not believe that it is possible or desirable to make the school course sufficient in itself—what is needed is a sound groundwork for

future study, and an awakening of interest. Further help should be provided through courses of lectures and demonstrations at clubs and institutes ; and the mother who has been through the elementary school course will be able to reap real benefit from talks at ante-natal clinics and infant welfare centres, and from the visits of the health visitor. What should be emphasised is the need for co-ordination—courses of lectures to selected groups (expectant mothers, parents, young adults, etc.) designed to complete a uniform scheme of school hygiene. Any doctor who has done much lecturing at clinics or institutes knows the disheartening feeling of beating at the air, born of the realization of the difficulty of doing any real good in speaking to unprepared and unselected audiences.

It will be noted that I have said little about sex education. The efforts which have been made in this direction of recent years have been prime examples of the very patching to which I have tried to draw attention. True—patching is better than nothing, when reconstruction is out of the question. But how much real good can be expected from a few lectures to children about to leave school—seed thrown upon soil which has never been prepared, and must be left unattended afterwards ? The "Facts of Life" are all very well, but the wise conduct of life does not depend upon the knowledge of a few facts. Sex hygiene must find its proper place as a part of health education, and its teaching must not confine itself to mere details. More important than these is the place of sex in everyday life, its manifold influences on society, on art and creative work of all kinds, on the subtle differences of mental attitude and make-up between men and women.

A point of peculiar interest at the present time is the difference between education and advertisement. Commercial interests have seized upon "health" and made it a keystone in propaganda. Backed by apparently unlimited resources, which bring to their aid the full force of the modern science of advertisement, these concerns are able to wield this weapon in a manner which it would be folly to attempt to counter. Nor would the attempt be wise, even if success might be expected. EDUCATION—that alone can succeed, by building up the critical faculties and the background of knowledge necessary to enable the people properly to select and reject. Propaganda should be met by dispelling ignorance—not by counter-propaganda.

It is for this reason that some of us who are interested in this matter are not very sanguine about the success of the poster cam-

paign in connection with the National Fitness drive which is being carried on at present. For years the cry for enlightenment has been growing more insistent ; and now when the official conscience has wakened, instead of meeting the demand by providing facilities for education of the people, we merely add another voice to the roar from the exploiters of "health." It is not enough to tell the public that clinics and health services exist ; they must be made to understand the real purpose behind them, and know enough about their own minds and bodies to be able to make full use of them.

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## (3) EXTERNAL SQUINTS AND HYPERMETROPIA.

During the year 1937, 514 cases of squint were examined. 440 of these were internal and 74 external in type. 419 of the internal squints occurred in hypermetropic and 21 in myopic eyes.

Of the 74 external squints, 16 were associated with myopia, 4 with mixed astigmatism and 54 with hypermetropia.

These figures do not represent true numerical ratios because all cases of myopia and all external squints are examined annually, but only a selected number of internal squints are seen each year. There are thus a number of children with internal squints who were not examined during 1937.

In hypermetropia a proportion greater than 440 to 54 between internal and external squints shows the marked preponderance of the former. In this article the 54 cases of hypermetropia and external squint are discussed.

The standing Committee on the prevention of blindness states in its report that "perhaps the most important factors in the production of squint are—

(1) Defects of focus and excessive efforts to get clear vision.
(2) Defects of the muscles that move the eyes.
(3) Inability of the brain to fuse dissimilar images from the two eyes."

In the more usual type of internal squint found in hypermetropic eyes the first factor operates strongly and the excessive convergence required for accommodation is partly responsible for the squint. When a squint acts outwards, however, the converse is the case, and the effort of convergence and the external squint are in direct opposition, so that the first causal factor has to be ruled out.

Again in a certain number of the 54 cases of external squint under review, the hypermetropic error in the two eyes was equal, and we may assume that there was no dissimilarity between the retinal images, so that any difficulty in fusing them must have been central and not due to the images themselves.

In three cases there was hypertelorism, an unusual formation of

the sphenoid bones of the skull causing a wide separation of the orbits and suggesting an anatomical cause for the divergence of the eyes.

In support of the muscular theory as a contributing factor one child with a left external squint developed a marked lateral nystagmus whenever the left eye was made to fix by covering up the right one. The theory of muscular defect is probably partly responsible in all these cases of external squint, but it is impossible to estimate their aetiology with any degree of real accuracy.

In three of the cases there were gross fundus changes reducing the vision in the squinting eye to less than 6/60, and resulting in complete loss of the power to focus. These three squints were all constant and of a very wide angle, two of them were traumatic in origin and followed the loss of vision in the injured eye. The third was a case of old hæmorrhage at the macula which might have been caused by a birth injury. These three cases are not included in the following descriptions.

The age of onset of these squints was very difficult to ascertain, because in school work it is often impossible to elicit an accurate history of a squint. Many parents fail to attend with their children, and many who do, have never noticed anything wrong until the school medical officer has drawn their attention to it. The ages at which the children were first referred to me for examination varied considerably, and two only had been noticed to squint at infant welfare centres before their admission to school.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | was | first | seen | at | the | age | of 4 years. |
| 8 | were | ,, | ,, | ,, | ,, | 5 | ,, |
| 6 | ,, | ,, | ,, | ,, | ,, | 6 | ,, |
| 5 | ,, | ,, | ,, | ,, | ,, | 7 | ,, |
| 7 | ,, | ,, | ,, | ,, | ,, | 8 | ,, |
| 11 | ,, | ,, | ,, | ,, | ,, | 9 | ,, |
| 2 | ,, | ,, | ,, | ,, | ,, | 10 | ,, |
| 2 | ,, | ,, | ,, | ,, | ,, | 11 | ,, |
| 3 | ,, | ,, | ,, | ,, | ,, | 12 | ,, |
| 4 | ,, | ,, | ,, | ,, | ,, | 13 | ,, |
| 1 | ,, | ,, | ,, | ,, | ,, | 14 | ,, |

I had the same difficulty in obtaining an accurate family history, but there seems to be an undoubted hereditary tendency in some of the cases. One child of five with an occasional right external squint had several paternal relations with a similar squint affecting the same eye, and three mothers who accompanied their children had an external squint. The difficulty of obtaining a family history was well illustrated by two of these mothers who warmly denied that they had ever had anything wrong with their eyes and seemed quite unconscious of a squint that was obvious even to a casual observer.

Twenty-nine of these external squints were alternating in type and 22 were confined to one eye.

In 10 of the latter 22 cases, the difference in hypermetropic error between the two eyes was spherical and the squint, as we would expect, affected the less hypermetropic eye.

Among the remaining 12 cases of unilateral squint, where the difference in hypermetropia was both spherical and cylindrical, the relationship between refractive error and squint was neither so simple nor so consistent. For example, one case had a cylindrical error of +2.0D in the squinting eye, and a spherical error of +0.25D in the fixing eye.

There was a noticeable variability in the angle of the squint in many individual cases. Frequently the squint was noticed to be of smaller angle when the eyes were made to focus a fairly near object, and at examination 15 of the squints were apparent only as a secondary deviation when the child looked deliberately into the distance. The position of rest of the two eyes seemed to be at fault, and the effort of convergence necessary for accommodation was strong enough to diminish or even to overcome the outward resting deviation. Mothers frequently volunteered the information that the child's eyes were worse "when he is tired" or "run down."

There were in all, 13 cases of amblyopia of whom only two had vision of less than 6/18. The degree and incidence of amblyopia are both lower than might have been expected, and this may be partly accounted for by the variability in the angle of the squints described in the previous paragraph, whereby these children occasionally achieve binocular vision.

Twelve of the cases with amblyopia are grouped together at the end of a table of visions and refractive errors appended below.

The one case omitted from the table was that of a girl who was originally given glasses of $\frac{+5.15D}{+0.25D}$ and $\frac{+5.25D,}{+0.5D}$ half a dioptre less than her full correction, and prescribed for a left internal squint, with corrected vision of 6/18. At the end of a year she was found to have a right external squint with no change in vision or refractive error in either eye. Her correction was immediately reduced by +1.0D and after three months her eyes appeared quite straight and her vision was still 6/6 6/18.

| | Vision. | | Refractive Errors when first seen. Right. | | Left. | |
|---|---|---|---|---|---|---|
| Agewhen first seen | Right. | Left. | Sphere. | Cylinder | Sphere. | Cylinder |
| 11 | 6/6 | 6/6 | +0.25 | | +0.25 | |
| 10 | 6/6 | 6/6 | +0.25 | | +0.25 | |
| 8 | 6/6 | 6/6 | +0.75 | | +0.75 | |
| 9 | 6/6 | 6/6 | +0.75 | | +0.75 | |
| 8 | 6/6 | 6/6 | +0.75 | | +0.75 | |
| 4 | 6/12 | 6/12 | +1.0 | | +1.0 | |
| 5 | 6/6 | 6/6 | +1.0 | | +1.0 | |
| 5 | 6/6 | 6/6 | +1.0 | | +1.0 | |
| 6 | 6/9 | 6/9 | +1.0 | | +1.0 | |
| 8 | 6/6 | 6/6 | +1.0 | | +1.0 | |
| 9 | 6/6 | 6/6 | +1.0 | | +1.0 | |
| 11 | 6/9 | 6/9 | +1.0 | | +1.0 | |
| 5 | 6/6 | 6/6 | +1.0 | | +1.0 | |
| 9 | 6/6 | 6/6 | +1.5 | | +1.5 | |
| 7 | 6/6 | 6/6 | +1.5 | | +1.5 | |
| 9 | 6/9 | 6/6 | +2.0 | | +2.0 | |
| 8 | 6/6 | 6/6 | +2.0 | | +2.0 | |
| 8 | 6/6 | 6/6 | +2.25 | | +2.25 | |
| 7 | 6/6 | 6/6 | +3.0 | | +3.0 | |

| | Vision. | | Refractive Errors when first seen. | | | |
|---|---|---|---|---|---|---|
| | | | Right. | | Left. | |
| Agewhen first seen | Right. | Left. | Sphere. | Cylinder | Sphere | Cylinder |
| 13 | 6/6 | 6/6 | +0.5 | +0.25 | +0.5 | +0.25 |
| 9 | 6/9 | 6/9 | | +4.25 | | +4.25 |
| 12 | 6/6 | 6/6 | +1.0 | | +0.25 | |
| 13 | 6/6 | 6/6 | +0.75 | | +0.5 | |
| 9 | 6/9 | 6/9 | +1.25 | | +0.5 | |
| 8 | 6/9 | 6/9 | +1.5 | | +2.0 | |
| 8 | 6/9 | 6/9 | +1.5 | | +2.0 | |
| 8 | 6/9 | 6/9 | +0.75 | +0.25 | | +0.75 |
| 6 | 6/6 | 6/6 | +3.25 | | +3.5 | |
| 9 | 6/6 | 6/6 | | +0.75 | +1.5 | +0.75 |
| 9 | 6/12 | 6/12 | +1.5 | +0.25 | +2.0 | |
| 7 | 6/6 | 6/6 | +1.5 | +0.5 | +1.0 | +0.5 |
| 5 | — | — | +2.0 | +0.5 | +2.0 | +0.75 |
| 10 | 6/6 | 6/6 | +1.5 | | +1.5 | +0.25 |
| 5 | — | — | +0.25 | +0.5 | | +0.25 |
| 6 | — | — | +2.0 | +1.0 | +3.0 | |
| 7 | — | — | +1.5 | +0.25 | +2.0 | +2.0 |
| 8 | 6/6 | 6/6 | +4.5 | +0.75 | +4.0 | +1.0 |
| 7 | 6/12 | 6/12 | +3.0 | +1.5 | +2.25 | +1.0 |
| 5 | 6/6 | 6/6 | +5.5 | +0.5 | +5.5 | |
| 9 | 6/9 | 6/6 | +2.0 | | +2.0 | |
| 7 | 6/6 | 6/9 | +2.5 | | +2.5 | |
| 9 | 6/12 | 6/6 | +1.0 | | +1.25 | |
| 7 | 6/6 | 6/18 | +1.0 | | +0.25 | +0.5 |
| 6 | 6/18 | 6/6 | +0.25 | +0.25 | +0.5 | |
| 6 | 6/6 | 6/36 | +1 | | +0.25 | |
| 14 | 6/18 | 6/6 | | +2.0 | +0.25 | |
| 5 | 6/12 | 6/6 | +0.25 | +0.5 | +2.0 | |
| 5 | 6/18 | 6/9 | +1.25 | +1.0 | +1.25 | +1.5 |
| 6 | 6/18 | 6/6 | | +1.5 | +1.5 | +1.0 |
| 8 | 6/24 | 6/9 | +5.0 | +1.5 | +4.5 | +2.0 |
| 12 | 6/9 | 6/12 pt. | +8 | | +7.5 | +1. |

The refractive errors were equal in both eyes in 22 cases and there were amongst these, only two cases of astigmatism of +4.25D cylinder and the other $\frac{+0.5D}{+0.25D}$ in both eyes.

Where the corrections were spherical and equal in both eyes, the actual degree of hypermetropia is seen from the table to be moderate, or even small in degree.

| | |
|---|---|
| Number of cases of +0.25D sphere | 2 |
| ,, ,, ,, +0.75D & +1.0D sphere | 10 |
| ,, ,, ,, +1.5D sphere | 2 |
| ,, ,, ,, +2.0D sphere | 3 |
| ,, ,, ,, +2.25D & +2.5D sphere | 2 |
| ,, ,, ,, +3.0D sphere | 1 |
| | 20 |

Twenty-nine cases showed a difference in refractive error between the two eyes and in the table below, these 29 cases of anisometropia are plotted in a graph table. The vertical columns represent the differences in spherical and the horizontal in cylindrical corrections between the two eyes.

| Difference in cylinders. | Difference in spheres. | | | | TOTAL |
|---|---|---|---|---|---|
| | 0 | +0.5D | +1.0D | +1.5D | |
| 0.0 | | 10 | 2 | | 12 |
| +0.5D | 4 | 3 | 2 | 2 | 11 |
| +1.0D | | 1 | | 1 | 2 |
| +1.5D | | | | | |
| +2.0D | | 1 | 1 | 1 | 3 |
| +2.5D | | 1 | | | 1 |
| TOTAL | 4 | 16 | 5 | 4 | 29 |

The table shows 12 cases with a difference of spherical error and four with a difference of cylindrical error only. The difference between the two eyes is less than one dioptre in more than half of the cases

so that we may conclude that without glasses there could not be any great disparity in size between the two retinal images.

Apart from the difference between the two eyes in individual cases, the actual degree of hypermetropic error varied a good deal among these anisometropic cases, from +8.0D sphere in the most marked to +0.25D in the least severe case.

Disregarding errors of astigmatism, there was one case of +8.0D sphere, one of +7.0D sphere, one of +5.0D sphere, and 19 cases of +1.0D sphere or less.

Among the last group there was one boy who had an error of +1.0D sphere when first seen, and in the four years during which he was under observation the refractive error had gradually diminished until finally the child was found to be myopic to the extent of -0.25D. Among the other children, no change other than the tendency of hypermetropia to diminish during the growth period was noted.

In the absence of an accessible orthoptic clinic, treatment of these cases presents some difficulty, and I have adopted the following palliative methods.

Where there has been no previous treatment and where the spherical error is equal in the two eyes, I do not as a routine prescribe any glasses : exceptions may be children of poor physique and those in whom there is some special indication for removing sources of eyestrain.

(NOTE : The correction of bilateral hypermetropic error might be supposed to diminish the effort of convergence needed for accommodation and, therefore, to aggravate a squint which is external in direction. That this is not always true in practice was proved by an interesting case which was transferred to me from another county. The child, a bonny, well managed girl of eight, had been given glasses for an occasional external alternating strabismus. Her error was +2.75D sphere in both eyes and she had been wearing +2.0D spheres for one year. Hoping to encourage a further effort of convergence, I reduced her correction to +1.5D spheres. In a few weeks, however, her mother reported an increase in the frequency and the angle of the squint, and the +2.0D lenses had to be replaced.)

In all cases I correct fully any error of astigmatism in order that the retinæ may form a clearly defined and undistorted image. I also correct any difference in spherical error between the two eyes in order to equalise the sizes of the retinal images.

When parents are present I offer them advice about general hygiene with special emphasis on the necessity for sufficient hours of sleep. I also demonstrate simple convergence exercises by which the child is made to focus an object brought from a distance of a few feet up to the tip of its nose. It has not been my experience that this rather tedious form of treatment has been persisted in for any length of time.

In children seen before the age of nine years in whom one eye is amblyopic, the child has worn some form of occluder before the normal eye while doing its school lessons. In three of the cases where this treatment was conscientiously carried out, an improvement in vision resulted.

Thirteen cases seen for the first and only time during 1937, are not of course included in the number treated, as there has been no opportunity of recording their progress.

On the whole I have not found that these methods of treatment have been very successful.

One case first seen at the age of 8 with an alternating external squint had no squint at the age of 13, nor could I elicit any secondary deviation.

A second child aged eight wore glasses for three years and after this time her eyes were quite straight and, as noted above, there was a perceptible improvement in three of the children who wore occluders.

Unfortunately, no marked improvement can be claimed for the remaining 33 children who received any form of advice or treatment.

"Orthoptic treatment" writes Mr. G. G. Penman, "is not a cure for all cases of squint . . . but it is a most valuable adjunct and makes for a much higher percentage of real successes."

The cases described in this series must be cases of choice for orthoptic treatment.

The main importance of these cases lies in the fact that the children fail to obtain normal binocular vision, and in some, there is a definite diminution in vision in the squinting eye. Apart from such serious loss of function, an external squint is always a very unsightly disfigurement.

The points of interest of the cases are :—

(1) The most common squints found among cases of hypermetropia are internal in type, but there are a certain number of more obscure origin, which are external.

(2) The causative factors in such external squints are partly muscular, partly due to a defect in the "fusion faculty," and rarely anatomical, in cases of hypertelorism.

(3) The incidence of amblyopia is relatively low in this type of squint.

(4) As the results of treatment hitherto adopted in this county have not proved wholly satisfactory, it is hoped that in the future, opportunities for new methods of treatment may lead to better results.

CONSTANCE WALTERS,

*School Oculist.*

# ELEMENTARY SCHOOLS.

## TABLE I.

**Medical Inspection of Children Attending Public Elementary Schools, Year Ended 31st December, 1937.**

### A.—Routine Medical Inspections.

Number of Code Group Inspections.

| | |
|---|---|
| Entrants | 3,717 |
| Second Age Group | 3,238 |
| Third Age Group | 3,072 |
| Total | 10,027 |
| Number of other Routine Inspections | 385 |

### B.—Other Inspections.

| | |
|---|---|
| Number of Special Inspections | 4,983 |
| Number of Re-Inspections | 3,231 |
| Total | 8,214 |

# TABLE II.

## A.—Return of Defects found by Medical Inspection in the Year ended 31st December, 1937.

| DEFECT OR DISEASE. (1) | | ROUTINE INSPECTIONS. No. of Defects. Requiring Treatment. (2) | ROUTINE INSPECTIONS. No. of Defects. Requiring to be kept under observation, but *not* requiring Treatment. (3) | SPECIAL INSPECTIONS. No. of Defects. Requiring Treatment. (4) | SPECIAL INSPECTIONS. No. of Defects. Requiring to be kept under observation, but *not* requiring Treatment. (5) |
|---|---|---|---|---|---|
| Skin | Ringworm : Scalp | — | — | 5 | — |
| | Ringworm : Body | — | 1 | 12 | — |
| | Scabies | 3 | — | 16 | — |
| | Impetigo | 20 | 1 | 116 | — |
| | Other Diseases (Non-Tuberculous) | 18 | 1 | 93 | 1 |
| Eye | Blepharitis | 63 | 1 | 51 | — |
| | Conjunctivitis | 6 | — | 20 | — |
| | Keratitis | — | — | — | — |
| | Corneal Opacities | 4 | 1 | 3 | — |
| | Defective Vision (excluding Squint) | 538 | 54 | 279 | 41 |
| | Squint | 210 | 10 | 53 | — |
| | Other Conditions | 19 | 2 | 50 | 1 |
| Ear | Defective Hearing | 12 | 1 | 16 | 1 |
| | Otitis Media | 42 | 6 | 68 | — |
| | Other Ear Diseases | 10 | 5 | 35 | 4 |
| Nose and Throat | Chronic Tonsillitis only | 365 | 454 | 95 | 92 |
| | Adenoids only | 39 | 57 | 42 | 10 |
| | Chronic Tonsillitis & Adenoids | 153 | 61 | 181 | 20 |
| | Other Conditions | 14 | 1 | 22 | 3 |
| Enlarged Cervical Glands (Non-Tuberculous) | | 17 | 28 | 14 | — |
| Defective Speech | | — | 1 | 13 | 2 |
| Heart and Circulation | Heart Disease : Organic | 22 | 17 | 12 | 118 |
| | Heart Disease : Functional | 2 | 3 | — | 1 |
| | Anæmia | 40 | 2 | 27 | 4 |
| Lungs | Bronchitis | 34 | 7 | 13 | — |
| | Other Non-Tuberculous Diseases | 5 | 12 | 5 | 2 |
| Tuberculosis | Pulmonary : Definite | — | — | 3 | — |
| | Pulmonary : Suspected | — | 2 | 5 | — |
| | Non-Pulmonary : Glands | — | — | 6 | — |
| | Non-Pulmonary : Bones and Joints | 2 | 1 | 1 | — |
| | Non-Pulmonary : Skin | — | — | — | — |
| | Non-Pulmonary : Other Forms | — | — | — | — |
| Nervous System | Epilepsy | — | — | 6 | — |
| | Chorea | 2 | 1 | 13 | 32 |
| | Other Conditions | 3 | 1 | 1 | 1 |
| Deformities | Rickets | 4 | 1 | 2 | — |
| | Spinal Curvature | 5 | — | 2 | — |
| | Other Forms | 23 | 25 | 45 | 7 |
| Other Defects and Diseases | | 66 | 27 | 946 | 336 |
| Total Number of Defects | | 1,741 | 784 | 2,271 | 676 |

## TABLE II.—continued.

**B.—Number of individual Children found at Routine Medical Inspection to require Treatment (excluding Defects of Nutrition, Uncleanliness and Dental Diseases).**

| Group. | For defective vision (excluding squint) | For all other conditions recorded in Table II A. | Total. |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| Entrants .... .... | 9 | 559 | 564 |
| Second Age Group | 245 | 308 | 499 |
| Third Age Group .... | 257 | 236 | 446 |
| Total .... | 511 | 1,103 | 1,509 |
| Other Routine Inspections .... | 31 | 39 | 59 |
| Grand Total .... | 542 | 1,142 | 1,568 |

**C.—Classification of the Nutrition of Children Inspected during the Year in the Routine Age Groups.**

| Age-groups | No.of Children Insp'd | A (Excellent) | | B (Normal) | | C (Slightly sub-normal) | | D (Bad) | |
|---|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. | % |
| Entrants .... .... .... | 3717 | 622 | 16.7 | 2736 | 73.6 | 350 | 9.4 | 9 | 0.24 |
| Second Age-group .... .... | 3238 | 503 | 15.5 | 2415 | 74.6 | 314 | 9.7 | 6 | 0.19 |
| Third Age-group .... .... | 3072 | 602 | 19.6 | 2182 | 71.0 | 281 | 9.1 | 7 | 0.23 |
| Other Routine Inspections .... | 385 | 74 | 19.2 | 265 | 68.8 | 45 | 11.7 | 1 | 0.26 |
| TOTAL .... | 10412 | 1801 | 17.3 | 7598 | 73.0 | 990 | 9.5 | 23 | 0.22 |

## TABLE III.

### Return of all Exceptional Children in the Area.

CHILDREN SUFFERING FROM MULTIPLE DEFECTS.

Children suffering from the following types of Multiple Defect, *i.e.*, any combination of Total Blindness, Total Deafness, Mental Defect, Epilepsy, Active Tuberculosis, Crippling, or Heart Disease .... .... .... .... .... .... .... .... 9

BLIND CHILDREN.

| At Certified Schools for the Blind. | At Public Elementary Schools. | At Other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|
| 2 | — | — | 1 | 3 |

PARTIALLY BLIND CHILDREN.

| At Certified Schools for the Blind. | At Certified Schools for the Partially Blind. | At Public Elementary Schools. | At other Institu-tions. | At no School or Institu-tion. | Total. |
|---|---|---|---|---|---|
| 10 | — | 5 | — | 3 | 18 |

DEAF CHILDREN.

| At Certified Schools for the Deaf. | At Public Elementary Schools. | At other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|
| 17 | 1 | — | — | 18 |

**TABLE III.—continued.**

## PARTIALLY DEAF CHILDREN.

| At Certified Schools for the Deaf. | At Certified Schools for the Partially Deaf. | At Public Elementary Schools. | At other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|---|
| — | — | — | — | — | — |

## MENTALLY DEFECTIVE CHILDREN.

### Feeble-Minded Children.

| At Certified Schools for Mentally Defective Children. | At Public Elementary Schools. | At other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|
| 15 | 133 | 1 | 51 | 200 |

| | Males | Females | Total |
|---|---|---|---|
| Notified to the Local Mental Deficiency Authority *during the year* .... .... | 2 | 10 | 12 |

## EPILEPTIC CHILDREN.

### Children Suffering from Severe Epilepsy.

| At Certified Special Schools. | At Public Elementary Schools. | At other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|
| 1 | — | — | 7 | 8 |

**TABLE III.—continued.**

PHYSICALLY DEFECTIVE CHILDREN.

A. Tuberculous Children.

*I.—Children suffering from Pulmonary Tuberculosis.*

| At Certified Special Schools. | At Public Elementary Schools. | At other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|
| 12 | 33 | — | 31 | 77 |

*I I.—Children suffering from Non-Pulmonary Tuberculosis.*

| At Certified Special Schools. | At Public Elementary Schools. | At other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|
| 23 | 69 | 2 | 30 | 123 |

B.—Delicate Children.

| At Certified Special Schools. | At Public Elementary Schools. | At other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|
| — | 93 | — | 6 | 99 |

C.—Crippled Children.

| At Certified Special Schools. | At Public Elementary Schools. | At other Institutions. | At no School or Institution. | Total. |
|---|---|---|---|---|
| 12 | 174 | — | 42 | 228 |

## TABLE III.—continued.

D.—Children with Heart Disease.

| At Certified Special Schools. | At Public Elementary Schools. | At other Institutions. | At No School or Institution. | Total. |
|---|---|---|---|---|
| — | 23 | — | 14 | 37 |

## TABLE IV.

### Return of Defects treated during the year ended 31st December, 1937.

Treatment Table.

*Group I.—Minor Ailments (excluding Uncleanliness, for which see Group V I.)*

| Disease or Defect. | Number of Defects treated, or under treatment during the year. | | |
|---|---|---|---|
| | Under the Authority's Scheme. | Otherwise. | Total. |
| (1) | (2) | (3) | (4) |
| *Skin*— | | | |
| Ringworm-Scalp— | | | |
| (i.) X-Ray Treatment | 1 | — | 1 |
| (ii.) Other Treatment | 4 | 33 | 37 |
| Ringworm-Body .... .... | 10 | 1 | 11 |
| Scabies .... .... .... | 15 | 25 | 40 |
| Impetigo .... .... .... | 113 | 170 | 283 |
| Other skin disease .... | 80 | 21 | 101 |
| *Minor Eye Defects*— | | | |
| (External and other, but excluding cases falling in Group II.) .... .... | 80 | 32 | 112 |
| *Minor Ear Defects* .... .... | 45 | 13 | 58 |
| *Miscellaneous*— | | | |
| (*e.g.*, minor injuries, bruises, sores, chilblains, etc.) | 774 | 24 | 798 |
| Total .... | 1,122 | 319 | 1,441 |

## TABLE IV.—continued.

*Group I I.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I.)*

| Defect or Disease. | No. of Defects dealt with. | | | No. of children for whom spectacles were | | | |
|---|---|---|---|---|---|---|---|
| | | | | Prescribed (1) | | Obtained (2) | |
| | Under the Authority's Scheme. | Otherwise. | Total. | (i) Under the Authority's Scheme. | (ii) Otherwise. | (i) Under the Authority's Scheme. | (ii) Otherwise. |
| Errors of Refraction (including squint). (Operations for squint should be recorded separately in the body of the School Medical Officer's Report) .... | 1,677 | 32 | 1,709 | — | — | — | — |
| Other Defect or Disease of the Eyes (excluding those recorded in Group I.) | 171 | — | 171 | — | — | — | — |
| Total .... | 1,848 | 32 | 1,880 | 1,582 | 32 | 1,460 | 22 |

*Group I I I.—Treatment of Defects of Nose and Throat.*

| Number of Defects | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Received Operative Treatment. | | | | | | | | | | | | Received other forms of Treatment. | Total number treated. |
| Under the Authority's Scheme, in Clinic or Hospital. (1) | | | | By Private Practitioner or Hospital, apart from the Authority's Scheme. (2) | | | | Total. (3) | | | | (4) | (5) |
| (i) | (ii) | (iii) | (iv) | (i) | (ii) | (iii) | (iv) | (i) | (ii) | (iii) | (iv) | | |
| – | 6 | 225 | – | – | – | 59 | – | – | 6 | 314 | – | — | 320 |

(i) Tonsils only. (ii) Adenoids only. (iii) Tonsils and adenoids. (iv) Other defects of the nose and throat.

## TABLE IV.—continued.

*Group IV.—Orthopaedic and Postural Defects.*

| | Under the Authority's Scheme. (1) | | | Otherwise. (2) | | | Total number treated. |
|---|---|---|---|---|---|---|---|
| | Residential treatment with education. (i) | Residential treatment without education. (ii) | Non-residential treatment at an orthopaedic clinic. (iii) | Residential treatment with education. (i) | Residential treatment without education. (ii) | Non-residential treatment at an orthopaedic clinic. (iii) | |
| Number of children treated | 34 | — | 297 | — | — | — | 331 |

*Group V.—Dental Defects.*

(1) Number of Children who were :—

(*a*) Inspected by the Dentist :

Routine Age Groups { Age. No. 5....2511, 6....2696, 7....2522, 8....2626, 9....2668, 10....2392, 11....2186, 12....1994, 13....1703, 14.... 355 } Total 21,653

Specials .... .... 811

GRAND TOTAL .... 22,464

(*b*) Found to require treatment .... .... 13,683

(*c*) Actually treated .... .... .... .... 10,716

(2) Half-days devoted to { Inspection.... 270, Treatment 1,818 } Total 2,088

(3) Attendances made by children for treatment .... .... 14,404

*Group V. Dental Defects—continued.*

| | | | | |
|---|---|---|---|---|
| (4) Fillings .... .... | Permanent teeth | 14,050 | | |
| | Temporary teeth | 24 | Total | 14,074 |
| (5) Extractions .... | Permanent teeth | 1,250 | | |
| | Temporary teeth | 10,472 | Total | 11,722 |
| (6) Administrations of general anæsthetics for extractions | | | | 10 |
| (7) Other operations | Permanent teeth | 65 | | |
| | Temporary teeth | 34 | Total | 99 |

*Group V I.—Uncleanliness and Verminous Conditions.*

| | |
|---|---|
| (i.) Average number of visits per school made during the year by the School Nurses .... .... .... | 7.9 |
| (ii.) Total number of examinations of children in the Schools by School Nurses .... .... .... | 110,471 |
| (iii.) Number of individual children found unclean .... | 4,774 |
| (iv.) Number of children cleansed under arrangements made by the Local Education Authority .... | — |
| (v.) Number of cases in which legal proceedings were taken :— | |
| (*a*) Under the Education Act, 1921 .... .... | 8 |
| (*b*) Under School Attendance Byelaws .... .... | 1 |

# SECONDARY SCHOOLS.

## TABLE I.

**Number of Children Inspected from 1st January, 1937 to 31st December, 1937.**

### A.—Routine Inspections.

| Age | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Males | – | – | 1 | 7 | 18 | 35 | 133 | 263 | 63 | 41 | 240 | 26 | 4 | 1 | 832 |
| Females | 5 | 4 | 4 | 14 | 11 | 38 | 136 | 234 | 50 | 16 | 177 | 16 | 1 | 1 | 707 |
| Total | 5 | 4 | 5 | 21 | 29 | 73 | 269 | 397 | 113 | 57 | 417 | 42 | 5 | 2 | 1,539 |

### B.—Special Inspections.

| | Specials. | Re-Inspections. |
|---|---|---|
| Males .... .... | 5 | 156 |
| Females .... .... | 4 | 97 |
| Total .... .... | 9 | 253 |

### C.—Total Number of Individual Children Inspected by the Medical Officers whether as Routine or Special cases.

Number of individual children inspected .... .... 1,792

## TABLE II.

### A.—Return of Defects found in the course of Routine Medical Inspection in 1937.

| Defect or Disease. | | Routine Inspections. | |
|---|---|---|---|
| | | Number referred for Treatment. | Number required to be kept under observation but not referred for treatment. |
| Malnutrition .... .... .... | | 3 | 1 |
| Uncleanliness, Head .... .... | | 1 | — |
| Skin .... | Impetigo .... .... | — | — |
| | Scabies .... .... | — | — |
| | Other Diseases—non-Tuberculous | 1 | 3 |
| Eye .... | Defective Vision .... | 158 | 43 |
| | Squint .... .... | 12 | — |
| | External Diseases .... | 6 | — |
| Ear | Defective Hearing .... | 1 | — |
| | Ear Disease .... .... | 2 | — |
| Nose and Throat | Enlarged Tonsils and Adenoids .... | 2 | 1 |
| | Enlarged Tonsils .... | 49 | 26 |
| | Adenoids .... .... | 3 | 2 |
| | Other Conditions .... | 4 | — |
| Teeth .... .... .... .... | | — | 56 |
| Cervical Glands .... .... .... | | 4 | 2 |
| Defective Speech .... .... .... | | — | 4 |
| Heart | Organic .... .... | 2 | 1 |
| | Functional .... .... | — | — |
| | Anæmia .... .... | 3 | 3 |
| Lungs—Non-Tubercular Diseases .... | | — | 1 |
| Tuberculosis Pulmonary | Definite .... .... | — | — |
| | Suspected .... .... | — | — |
| Nervous System | Chorea .... .... | 1 | — |
| | Other Conditions .... | — | — |
| Deformities | Spinal Curvature .... | 2 | — |
| | Flat Foot .... .... | 73 | 11 |
| | Other Forms .... | 9 | 4 |
| Enlarged Thyroid Gland .... .... | | — | — |
| Other Diseases or Defects.... .... | | 1 | — |

### B.—Number of Individual Children found at Routine Medical Inspection to require treatment (excluding Uncleanliness and Dental Diseases.)

| | |
|---|---|
| Number inspected .... .... .... .... | 1,539 |
| Requiring treatment .... .... .... .... | 291 |
| Percentage requiring treatment .... | 19.0% |